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Alison E Barber
Major professor

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THE ADOPTION OF LIFE BALANCE INNOVATIONS: TWO PERSPECTIVES

By

Deborah Winters

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ABSTRACT

THE ADOPTION OF LIFE BALANCE INNOVATIONS: TWO PERSPECTIVES

By

Deborah Winters

Research has documented the consequences of work-family conflict for individuals and the implications for employers. Many life balance innovations have been developed to help ameliorate this conflict by either easing time constraints or by helping employees fulfill outside obligations. This paper presents human capital theory hypotheses as a way of explaining why companies will invest differently in life balance innovations. In the absence of human capital predictors of innovation adoption, institutional theory was tested as an alternative explanation of why some companies choose to invest in life balance innovations.

To test these theories, surveys were mailed to 950 human resource executives and were returned in a usable form by 167 respondents. This survey information along with archival company information was entered into a regression with the number of innovations adopted as the dependent variable. The independent variables explained nearly a third of the possible variance in innovation adoption ($R^2 = .32$). This adoption was explained by the control variable company size, as well as by two human capital variables: training expenditures and labor intensity. When alternative dependent variables were used - some support for other human capital variables including education and

average employee age was found. In no model, were any of the institutional hypotheses supported. Implications of these results for theory development are presented including post hoc analyses on life balance opinion leaders. Finally, study limitations, and recommendations for future research in both human capital theory and life balance innovations are discussed.

DEDICATION

To Mom and Dad

For never encouraging me to take the easy way out

"No coward soul is mine" Emily Brontë

ACKNOWLEDGMENTS

I feel so indebted to so many people that it is hard to believe that mine is the only name on the cover page.

I must first thank Alison Barber whose patience with my long list of questions was matched only by her intelligence and grace. I could not have found a chair who so challenged me to excel and remained in such good humor. Thanks go as well to my other committee members -- Ellen Kossek, Linn Van Dyne, and John Wagner. Ellen by knowing that you said okay to the work/family stuff, and John that you said okay to the institutional part, and Linn that you said okay to everything - made me certain that it was truly okay. Thanks to the rest of the management department for developing my skills early in the program and keeping an open door throughout my dissertation. Larry Stimpert was especially helpful with my survey and cover letter design.

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Cheers!

> *Conloqui et conridere et vicissium benevole obsequi, simul leger libros dulciloquos, simul nugari et simul honestari*
>
> Conversations and jokes together, mutual rendering of good services, the reading together of sweetly phrased books, the sharing of nonsense and mutual attentions --- St. Augustine, *Confessions*

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INTRODUCTION

Many innovations that are touted as radical departures from accepted ways of doing business and as the last hope for American industry are later derided as fads, fashions, and frauds. Among the more notable examples are quality circles (c. f. Lawler & Mohrman, 1985; Steel & Lloyd, 1988), job enrichment (c. f. Hackman, 1975), and employee participation programs (Wagner, 1994), all of which were and are enthusiastically adopted despite little or no support for their relationship to productivity and profitability (Abrahamson, 1991). American corporations' penchant for new innovations and fads has not seemed to fade despite these innovations' failings.

Among the more recent innovation trends has been companies' increased awareness of the need for life balance and the increased adoption of life balance innovations to help facilitate this balance. These alternative schedule options and dependent care benefits have been described by proponents as a means of making the workplace more 'family friendly' and more accommodating to all of those with non-work demands (c. f. Friedman & Galinsky, 1992; Shellenbarger, 1992). Research findings on the individual innovations which make up life balance innovations, however, have been equivocal (Dunham, Pierce, & Castaneda, 1987), leading one to question which companies have adopted them, to what degree, and to look for explanations for these choices. Van de Ven (1986) wrote that:

> Since it is not possible to determine at the outset whether a new idea is an 'innovation' or a 'mistake,' and since we assume that people prefer to invest their energies and careers on the former and not the latter, there is a need to explain how and why certain innovative ideas gain currency (i.e., are implemented). (p. 592)

The purpose of this study is to explain the adoption of life balance innovations at the organizational level and to examine the explanatory power of two theories: human capital theory and institutional theory in regards to that adoption. These two theories were chosen to offer insight into adoption decisions within a theoretical framework, especially since previous life balance innovation research has been primarily atheoretical (Thierry & Meijman, 1994). In addition, Stinchcombe (1965) maintained that the most powerful way to set up theoretical research was to compare the usefulness of two theories against each other — rather than against chance.

Human capital refers to the productive capabilities of people (Becker, 1975); human capital theory investigates the choices organizations make to increase the value of their human capital (Jackson & Schuler, forthcoming). Human capital theory hypotheses will predict that organizations with highly trained and educated work forces, as well as those who bear high costs because of work-family conflict, will adopt life balance innovations as a means of improving retention, recruitment, and productivity. Institutional theory argues that organizations are social entities that seek approval for their existence and performance in socially constructed environments and that organizations conform with their environments to gain legitimacy and acceptance (Meyer &

Rowan, 1977). Institutional theory hypotheses will predict that in the absence of 'high-need' circumstances and characteristics identified from within the human capital perspective, some organizations will still adopt life balance innovations for coercive, normative, or mimetic reasons. Figure 1 presents the model of these hypotheses.

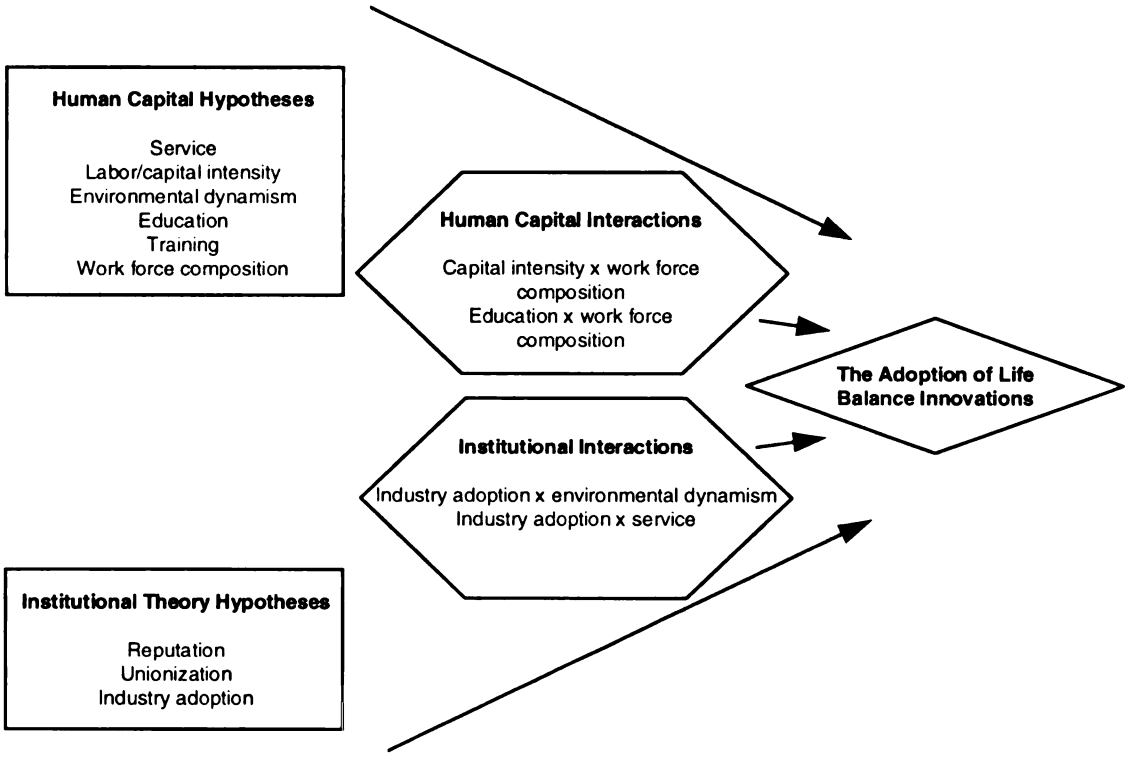

Figure 1
Adoption of Life Balance Innovations Model

The distinction of which theory explains life balance innovation adoption choices is an important one because enlightened organizations will want to know whether their decisions are being made for efficiency reasons (per the human capital model), for institutional reasons or for both. It is important to know how companies are choosing their innovations to ensure that the reasons used are in fact acceptable and appropriate to the goals of the innovation. This knowledge will also allow companies to properly assess their innovations using metrics that match the original reasoning behind the adoption. For instance, providing unpaid dependent care leave may not seem to be an efficient choice for an organization, but it may allow them to comply with legislation and may keep them out of court. If reducing legal problems was the goal of the program, then the adoption was in fact an efficient choice.

Life balance innovation adoption decisions are particularly important given the high potential costs of work-family conflict (the stress employees feel because of competing life roles) and the range of life balance innovations to choose from which address this conflict. In order to understand organizations' adoption decisions, some background information on innovation research and work-family conflict is necessary. This dissertation will begin with a brief review of innovation research that examines why these innovations will be studied as a set, rather than individually. Second, a review of the work-family conflict research will be provided, so that an understanding of what constitutes 'high-need' is gained. This will be followed by descriptions of the life balance innovations developed to ameliorate work-family conflict and that are the

objects of this study. This research will then include introductions to human capital theory and institutional theory and will explain and predict these theories' relationships to life balance innovation adoption. A methods section will describe the survey and the measures used to test these hypotheses and will be followed by the results of the survey. Finally, a discussion section will describe the findings' implications for theory development and for the practices of human resources and management.

INNOVATION SETS

Chapter Overview

This chapter will define the term 'innovation' and will explain how innovation adoption will be studied here in sets. This innovation set structure will be contrasted with more traditional ways of studying innovation adoption.

Definition of Innovation

Innovations are formulas or programs which the users perceive as new (Rogers, 1982). The adoption of innovations encompasses the generation, development, and implementation of new ideas. A new innovation can be a new product or service, a new production process, a new administrative system, or a new program pertaining to organizational members. The adoption of innovations is generally intended to contribute to the performance or effectiveness of the adopting organization. Innovation is a means of changing an organization, whether as a response to changes in its internal or external environment or as a preemptive action taken to influence an environment (Damanpour, 1991).

Innovation research has generally fallen into two categories — research that has looked at the adoption of a single innovation across organizations or research that has looked at all of the innovations an organization has adopted in an attempt to measure global innovativeness. There have been recent calls to

expand our understanding of innovation adoption by studying groups of related innovations or innovation sets (Damanpour, 1991). Meyer and Goes (1988) argued:

> It is probably a mistake to expect broad-scope examinations of organizational innovativeness to add much to our understanding of the adoption of innovations. It is probably equally mistaken to expect fine-grained studies of innovation assimilation to yield many new insights in organizational effectiveness and adaptability. (p. 918)

Innovation Sets

Because this study is attempting to explain the adoption of several related life balance innovations, innovation adoption will be researched at the set level. When similar innovations operating as substitutes are grouped together (in this study: those that support life balance), a better measure of the organization's commitment to that issue is evident, since the role of individual innovation characteristics is less strong. The rejection by a company of a sole innovation may be a function of that innovation's inappropriateness for the firm, not a disavowal of life balance. Looking at a related group of innovations will also help to show the strength of commitment to life balance. Kossek and Nichol (1992) recommended that future life balance research should look at complete work/family strategies rather than individual innovations since many companies offer more than one innovation and researchers may not be able to separate their effects.

The use of innovation sets also responds to the systems idea of organizations. Systems theorists are aware of the complexity of organizations

and of the inappropriateness of applying or extending models which do not take this complexity into account. Scott (1992) wrote:

> An important characteristic of exceedingly complex, probabilistic systems is that the whole is more than the sum of its parts in the pragmatic sense that given the properties of the parts and the laws of their interaction, it is not a trivial matter to infer the behavior of the larger system. (p. 87)

Complexity demands new ways of studying and understanding and the use of innovation sets is one such new way. Katz and Kahn (1978) wrote about the importance of looking at the interconnectedness of system components. They wrote about the input — process — output model, such that human resource management is treated as a subsystem embedded into a larger organizational system. An open system is dependent on the environment for inputs, which are transformed during the process stage to create outputs which are received back into the environment. Similarly, for life balance innovations, the interconnectedness of these programs should be considered rather than looking at these connected pieces separately. This set format is more appropriate for this study than either a single innovation or global innovation approach would be.

Single Innovation Research

Research that studies a single innovation typically examines the organizational characteristics predicting an organization's decision to adopt that one innovation (i.e. corporate predictors of flextime). While this design is

appropriate if understanding one particular innovation is the goal, critics of this type of single innovation research have argued that the results of these types of studies may reflect the attributes of the innovations studied more than the characteristics of the organization (Damanpour, 1991), especially since it is impossible to know if the results obtained would be predictive of any other innovation, including those with the same purpose but a different structure.

Innovation researchers have also explained that studies using a single innovation ignore how organizations, especially large ones, often adopt many innovations in a given time period. Because of the multiplicity of innovation adoption, the study of individual innovations, especially when the innovations are not related to the primary work activity of an organization, does not provide reliable results on characteristics of innovative organizations (Damanpour, 1991) (assuming the authors are in fact trying to explain innovative behavior). This inappropriateness may be especially true for the study of life-balance innovations or other administrative innovations since they have many variations and substitutes. Administrative innovations are those innovations that operate on the social system of an organizations (Daft, 1978) and change an organization's climate, communication, or human resource practices (Damanpour & Evan, 1984). A company's decision to offer one life balance innovation over another may not be because of low-innovativeness or because of a low commitment to life balance but because the features of a single innovation may not be appropriate for business needs. Therefore, research

designs that use the organization as the level of analysis which is under consideration are inappropriate if an investigator wishes to predict or explain the adoption of a single innovation (Meyer & Goes, 1988).

Global Innovation Research

Recently, researchers have also looked at innovativeness as a global property, with the total number of innovations adopted as the primary dependent variable. When these researchers construct innovativeness scores by adding nominally measured and unrelated adoptions together, they remove specific innovations from their social contexts, and ignore pre- and post-adoption events (Meyer & Goes, 1988). The advantage of this design and the reason that researchers choose it, is its ability to compare innovation adoption rates across firms, which may be investing in different types of innovations appropriate to their respective sectors. There are, however, costs to this research design as well. As Damanpour and Evan (1984) pointed out, innovations do vary, and what predicts some innovations will not predict others. The study of one type of innovation variable may produce results which differ from the study of another type.

In order to study the characteristics of corporations which have responded to life balance interests, it is necessary to use a hybrid of the two most common innovation research structures and study innovation sets. This hybrid will look at innovation sets of related innovations. The weaknesses of these single and global research design structures for this research question can

be lessened when multiple innovations' adoptions are studied in a way such as in innovation sets that allows the role of organizational characteristics to become evident (Damanpour, 1991). These characteristics in turn should be useful in providing insight into what types of firms adopt a particular category of innovations. The set that will be studied in this dissertation is that of life balance innovations which are designed to ameliorate work-family conflict which will be discussed next.

LIFE BALANCE AND WORK-FAMILY CONFLICT

Chapter Overview

This chapter provides an overview of the research conducted on work-family conflict — the stress that life balance innovations are designed to ameliorate. The consequences and antecedents of work-family conflict are presented. This review of work-family conflict is included because the consequences of this conflict are frequently used as the justification for the adoption of life balance innovations. These organization costs include absenteeism, turnover, and reduced productivity.

Definition of Work-Family Conflict

While most organizational behavior studies continue to examine the relationships between work-related independent and work-related dependent variables, increasing numbers of researchers and practitioners are now looking at the interplay of work and non-work spheres. Frequently, this interplay leads to conflict when people believe that efforts to fulfill work role demands will interfere with efforts to fulfill non-work demands and vice versa. This conflict emerges because of an individual's limited time and energy (time-based conflict), their personal sense of strain and preoccupation (strain-based conflict), and the carry-over of behaviors from work to non-work locations and from non-work to work locations (behavior-based conflict) (Greenhaus & Beutell, 1985).

For this study, the term 'life balance' is used to describe the balance between work and family obligations but also encompasses other non-work responsibilities such as friends, hobbies, and community service. Unfortunately, most of the research available has been limited to just the study of work and family obligations. The review that follows on work-family conflict research does not provide much information about other obligations and sources of conflict. Future research should more comprehensively investigate other non-work responsibilities, but for this study, it is assumed that life balance innovations can be used for both family and non-work/non-family responsibilities.

The Families and Work Institute (1990) found that more than 60 percent of a sample of Fortune 1000 headquarters employees said that their jobs robbed them of adequate energy and time to do things with their families. More than 80 percent said that they were only sometimes, rarely, or never able to completely fulfill their personal responsibilities. Work-family conflict researchers have predicted that this conflict will increase as the number of single-parent and dual career families increases (Cook, 1989), as eldercare demands increase (Kossek, DeMarr, Backman, & Kollar, 1993), and as technological advances (such as voice mail, modems, and fax machines) multiply and make it more difficult to separate work time from family time (Kofodimos, 1993). The most common model for testing work-family conflict to date has been the one shown in Figure 2.

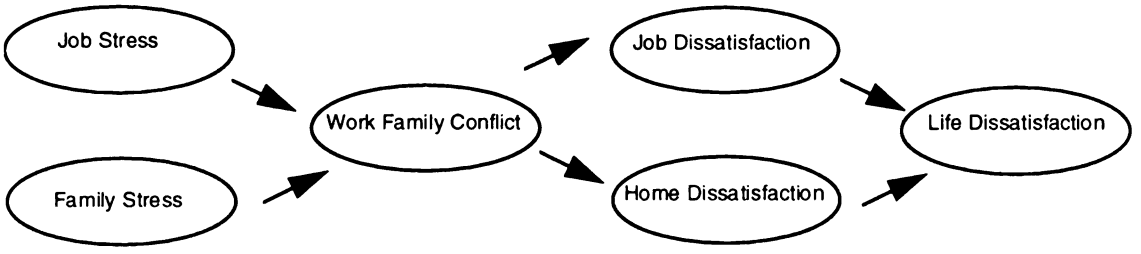

Figure 2
Work-Family Conflict Model

This model has shown that for work-family conflict to evolve there must be stressors from both the home and work spheres (Duxbury & Higgins, 1991). Once work-family conflict exists, it has implications for both the spheres that it emanates from, as well as for overall measures of life satisfaction. Several studies have documented the significance of this model's relationships (cf. Duxbury & Higgins, 1991; Higgins & Duxbury, 1992; Rice, Frone, & McFarlin, 1992). Others have further documented the links between parts of the model such as the link between job satisfaction and life satisfaction (cf. Judge & Hulin, 1993; Judge & Watanabe, 1994; Tait, Padgett, & Baldwin, 1989).

Work-family conflict research has, however, looked at many variables beyond this basic model. Table 1 presents an overview of the research on work-family conflict since Greenhaus and Beutell's (1985) review. Only those hypotheses that were empirically supported are included. This research has documented the consequences of work-family conflict that negatively impact the individual, the individual's non-work responsibilities, and the organization,

as well as the work, family, and psychological antecedents of work-family conflict.

Although the most recent studies have begun to differentiate between work-in-family conflict, which is conflict from the interference of work into family life, and family-in-work conflict, which is the conflict that occurs when situations from the home interfere with work obligations, studies with these slightly different dependent variables do not seem to have different predictors. Research has found that far more subjects respond that they feel work is impinging into their family and non-work spheres than respond that they feel non-work is interfering in work responsibilities (Gutek, Searle, & Klepa, 1991). But just as researchers have found that work and family are not separate domains (Kanter, 1977), Frone, Russell, and Cooper (1992) have found that work-in-family conflict and family-in-work conflict are not unrelated constructs; the two constructs have a reciprocal relationship, which may be a function of the overlap and relatedness of their predictors. Because of these similarities, research here is reported together that has looked at any of three dependent variables — work-family conflict, work-in-family conflict, or family-in-work conflict. It is also presented together since the life balance innovations that will be presented in the next chapter are targeted at helping employees attain a more global 'life balance' and are not usually targeted to a particular subset of conflict.

Table 1
Antecedents and Consequences of Work-Family Conflict

AUTHOR	SAMPLE	ANTECEDENTS	CONSEQUENCES
Bacharach, Bamberger, & Conley (1991)	Nurses	Role conflict	Burnout
	Engineers	Role overload Role conflict	Burnout
Bedeian, Burke, & Moffet t(1988)	Married, full-time accountants	Work-related role stress	Life satisfaction (-) Marital satisfaction (-)
Cooke & Rousseau (1984)	School teachers	Expected to work beyond normal hours Married or parent	Physical strain (including back pain, fatigue, dizziness etc.)
Duxbury & Higgins (1991)	Dual career managers with children	Family expectations Family involvement Family conflict Work expectations Work involvement Work conflict	Quality of family life (-) Quality of work life (-)
Duxbury, Higgins, Lee, & Mills (1992)	Public and private Canadian employees	Female Manager Parent Public sector	Intent to turnover Low job commitment
Frone, Russell, & Cooper (1992)	Married or parents who work 20+ hrs	Family involvement[1] Family stressors[1] Job stress[2]	Depression[3] Job distress[3]
Frone, Russell, & Cooper (1993)	Random residents of Erie Country, NY		Abusive alcohol consumption (moderated by belief that alcohol promotes relaxation and tension reduction)
Goff, Mount, & Jamison (1990)	Electronics company employees with small children	Satisfaction with child care (-) Supervisor support (-)	Absenteeism
Good, Sisler, & Gentry (1988)	Retail managers		Intent to turnover Job satisfaction (-)
Greenhaus, Bedeian, & Mossholder (1987)	Married, full-time accountants	Marital adjustment (-) Non-supportive work environment Reward inequity Role conflict Time commitment to work	

Table 1 (cont'd)

AUTHOR	SAMPLE	ANTECEDENTS	CONSEQUENCES
Greenhaus, Parasuraman, Granrose, Rabinowitz, & Beutell (1989)	Married or co-habitating dual-career couples	Job tenure (- men)[4] Job involvement (women)[4] Role ambiguity (men) Role overload[4] Task autonomy (- women)[4] Task complexity (women)[4] Age (men)[5] Education (women)[5] Job involvement (women)[5] Role ambiguity (men)[5] Role overload[5] Schedule inflexibility (men)[5] Task autonomy (men)[5] Task complexity (women)[5]	
Gutek, Searle & Klepa (1991)	Psychologists	Female[1] Hours at home[2] Hours at home x gender[2] Hours worked[1] Hours worked x gender[1]	
	Executive MBAs, married with children	Hours at home[2] Hours at home x gender[2] Hours worked[1] Hours worked x gender[1]	
Higgins & Duxbury (1992)	Men with children	Work conflict Family conflict	Quality of family life Quality of work life
Higgins, Duxbury, & Irving (1992)	Managers with children	Family conflict Job involvement Work conflict Work expectations	Quality of family life Quality of work life
Kelly & Voydanoff (1985)	Employed parents in southeastern metropolitan area	Being a female single parent[6] Having small children[6] Amount of overtime worked[6] Dissatisfaction with work hours[6]	
Near, Smith, Rice & Hunt (1984)	Respondents to Quality of Employment survey	Job satisfaction Life satisfaction	
Parasuraman, Greenhaus, & Granrose (1992)	Married or co-habitating dual-career couples		Life stress (men)
Rice, Frone & McFarlin (1992)	Full-time, married or parent		Family satisfaction (-) Job satisfaction (-) Leisure satisfaction (-)

Table 1 (cont'd)

AUTHOR	SAMPLE	ANTECEDENTS	CONSEQUENCES
Yogev & Brett (1985)	Married employees of hi-tech company with children		Job satisfaction (-) Organizational commitment (-)
Youngblood (1984)	Full-time unionized employees of public utility	Absenteeism[7] Illness[7]	
Zahrly & Tosi (1989)	New employees at manufacturing facility	Self-monitoring Type of induction mode	

[1] Predicts family-in-work conflict
[2] Predicts work-in-family conflict
[3] Consequences of family-in-work conflict
[4] Predicts time-based work-family conflict
[5] Predicts strain-based work-family conflict
[6] Predicts job tension
[7] Significantly related to work x non-work interaction

Consequences

Work-family conflict has negative consequences for the individual experiencing the work-family conflict, and the individual's non-work responsibilities. Direct organizational consequences of work-family conflict have not been well studied but many individual consequences have strong organizational implications and are discussed here.

Individual. Several studies have documented the personal costs associated with work-family conflict. Among the costs are a perception of reduced life satisfaction (Bedeian, Burke, & Moffett, 1988; Cooke & Rousseau, 1984; Higgins, Duxbury, & Irving, 1992; Kopelman, Greenhaus, & Connolly, 1983), reduced quality of work life or reduced job satisfaction (Duxbury & Higgins, 1991; Higgins et al., 1992; Rice et al., 1992), increased health risks (Cooke & Rousseau, 1984; Kofodimos, 1993; Youngblood, 1984), higher rates of depression (Frone et al., 1992; Keith & Schafel, 1980), and other indices of psychological distress (Cooke & Rousseau, 1984; Parasuraman, Greenhaus, & Granrose, 1992; Pleck, Staines, & Lang, 1980).

Non-work responsibilities. Costs can also arise for non-work responsibilities. Work-family conflict correlates with perceived poorer performance of parenting role (Greenhaus & Beutell, 1985), reduced quality of family life (Duxbury & Higgins, 1991; Higgins & Duxbury, 1992; Higgins et al., 1992; Rice et al., 1992), family distress, defined as a negative emotional reaction to one's experiences as a parent or marital partner (Frone et al., 1992), lower

marital satisfaction (Bedeian et al., 1988), as well as reduced leisure satisfaction (Rice et al., 1992). Behavior based conflict, which is the conflict that occurs when patterns of behavior that are appropriate for one role are incompatible with the behaviors expected in the second role sphere (Greenhaus & Beutell, 1985) may have the strongest consequences in the home as problems arise as people apply work behaviors to a home setting.

Organization. Work-family conflict has probable consequences for the organization as well, since work-family conflict leads to some personal costs that seem to have strong organizational implications. Employees who have a high level of work-family conflict have higher rates of absenteeism (Blegan, Mueller, & Price, 1988; Goff, Mount, & Jamison; 1990; Youngblood, 1984), increased intent to turnover (Blegan et al., 1988; Duxbury, Higgins, Lee, & Mills, 1992; Good, Sisler, & Gentry, 1988), reduced organizational commitment (Yogev & Brett, 1985), higher feelings of job distress defined as a negative emotional reaction to work experiences (Frone et al., 1992), feelings of work overload (Cooke & Rousseau, 1984), and increased burnout (Bacharach, Bamberger, & Conley, 1991).

In addition to these costs, research at the Center for Creative Leadership has suggested that managers and executives who lead unbalanced lives often demonstrate flawed management and leadership behavior patterns, inappropriate attempts to control, harsh responses to others' mistakes, reluctance to seek help, and failure to praise direct reports (Kofodimos, 1993).

These may all be consequences of strain based conflict which is when strain from one role, which may manifest itself as tension, anxiety, fatigue, or depression, impacts performance in another role (Greenhaus & Beutell, 1985). It is these organizational consequences that are the likely justification for the adoption of life balance innovations, since they can most easily be shaped as a business need.

Antecedents

Antecedents of work-family conflict are also varied and arise from features of the work or work place, features of the family, and/or the subject's psychological state.

Features of work. Many work features have been shown to be predictive of work-family conflict. Among them are working in an environment that is not supportive of family issues (Greenhaus, Bedeian, & Mossholder, 1987), working in the public sector (Duxbury et al., 1992), having a long job tenure (Greenglass, Pantony, & Burke, 1989), having high task autonomy or task complexity (Greenhaus, Parasuraman, Granrose, Rabinowitz, & Beutell, 1989), and perceiving reward inequity (Greenhaus et al., 1987). Studies have also consistently shown that hours worked on the job, amount of overtime, and schedule inflexibility all contribute to work-family conflict (Cooke & Rousseau, 1984; Greenhaus et al., 1989; Gutek et al., 1991; Keith & Schafel, 1980; Kelly & Voydanoff, 1985; Pleck et al., 1980).

Features of family. Demands from the home can also impact work-family conflict. Perceived family expectations, which are the pressures an individual feels to assume increased family role responsibilities (Duxbury & Higgins, 1991), and spending large number of hours at home (Gutek et al., 1991) have both been linked to work-family conflict. Having high family involvement — the degree to which an individual identifies with his/her family role and is committed to that role (Duxbury & Higgins, 1991; Frone et al., 1992) has also predicted work-family conflict. In addition, being dissatisfied with one's child care arrangements (Goff et al., 1990), having a high number of family stressors (Frone et al., 1992), as well as being poorly adjusted to marriage (Greenhaus et al., 1987) can also increase work-family conflict. Many studies have shown that family size and having pre-school aged children, in particular, are strong antecedents of work-family conflict (cf. Cooke & Rousseau, 1984; Duxbury et al., 1992; Greenhaus & Kopelman, 1981; Keith & Schafel, 1980; Kelly & Voydanoff, 1985; Pleck et al., 1980).

Psychological constructs. Three main psychological constructs have also been related to work-family conflict: role conflict, work conflict, and family conflict. These forms of conflict are very similar in definition to work-family conflict so research results documenting their relationship to work-family conflict are unsurprising. Role conflict is the "simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make more difficult compliance with the other" (Kahn, Wolfe, Quinn, Snoek, & Rosenthal,

1964, p. 19). Role conflict was found to predict work-family conflict by Bacharach et al. (1991) and by Greenhaus et al. (1987). Work conflict, the extent to which a person experiences incompatible pressures within the work domain, was also positively related to work-family conflict (Duxbury & Higgins, 1991; Higgins & Duxbury, 1992; Higgins et al., 1992). Family conflict is the extent to which a person experiences incompatible pressures within the home. Duxbury and Higgins (1991), Higgins and Duxbury (1992), and Higgins et al. (1992) all found that a high amount of family conflict was predictive of high amounts of work-family conflict.

Implications for Life Balance Innovations

Because there are organizational implications for many of the work-family conflict consequences, work-family conflict researchers have recommended intensified company involvement in life balance through innovation adoption (cf. Lee, Duxbury, Higgins, & Mills, 1992; Tenbrunsel, Brett, Stroh, & Reilly, 1994). While the researchers point out the benefits to the individual workers, it is likely the organizational consequences - turnover, burnout, absenteeism that are the prominant business issues in these adoption decisions. This involvement and these adoption decisions can take many forms, the specifics of which will be described next in the 'Life Balance Innovations' chapter.

LIFE BALANCE INNOVATIONS

Chapter Overview

This chapter will define life balance innovations and further catalogue them into full-time, less than full-time, and dependent care life balance innovations. The research on each sub-set and for each innovation is presented.

Definition of Life Balance Innovations

Life balance innovations are those innovations which help employees manage their time, care for their dependents, and meet other non-work obligations. These innovations were developed to lessen the previously described work-family conflict and to meet two criticisms by work-family advocates. These are: (1) that companies are not involved in enough dependent care issues and (2) that companies have an outdated image of the American family (cf. Friedman & Galinsky, 1992; Shellenbarger, 1992). Tenbrunsel et al. (1994) wrote: "At this point, few organizations are far sighted enough to provide the kind of dependent care benefits that liberate male and female employees from the fixed level of attention necessary to manage work and family " (p. 32). Duxbury and Higgins (1991) wrote that despite changing family structures, many companies continue to reward and support traditional role distributions and they noted that there is a limited use of work options that support dual-career or other non-traditional lifestyles. These criticisms are however, being met and there have been increases in the number of companies offering the

innovations, in the variety of programs available, and in the percentage of employees eligible to participate (Friedman & Galinsky, 1992).

The concepts of life balance and flexibility are relatively new to business organizations and have emerged in response to the needs of today's companies and workers. Before the 1970s, standardization was the norm in human resource management (Olmsted, 1992). Most employees worked Monday-Friday, from 9-5, at a location specified by their employer. Human resource policies have changed, however, to be more flexible and less standardized. The diversification of the work force, the transition from a production to a service oriented job market, increasing problems with commuter gridlock and air quality, and the emergence of a global economy have all forced companies to rethink their human resource policies which focused on consistency rather than on individual need (Olmsted, 1992). This rethinking has led to an increase in the number of employees to whom these benefits are available, as well as to an increase in the types of innovations available to help employees achieve life balance (Friedman & Galinsky, 1992). The business need of these innovations has been further stressed by the increased research on the costs of work-family conflict and an increase in the numbers of workers who are most susceptible to this conflict. These workers include of single-parents and working parents of small children — both of which are groups whose numbers have increased (Advancing Women, 1993; Auerbach, 1988; Brody, 1991; Cooke & Rousseau, 1984; Duxbury et al.,1992).

Life Balance Innovation Sets

Life balance innovations, which have been adopted by organizations to address work-family and other needs, fall under three main categories: full-time work, less than full-time work, and dependent care benefits. See Table 2 for an overview of the main innovations. A history and a description of fifteen innovations under these three headings will follow. Intensity of the research on these programs varies, with some innovations such as flextime fairly well studied, while others such as phased retirement remain almost unresearched. The innovations are divided into three categories for organizational purposes and although the current research on the innovations does not support separate hypotheses based on these categories, analyses on these categories may guide future research.

Table 2
Life Balance Innovations

PROGRAM	DESCRIPTION
FULL-TIME	Options that employees have to complete a 40 hour work week in a non-traditional format
Flextime	Schedules that permit employees to choose their starting and quitting times within boundaries set by management.
Compressed work week	A 40 hour week that is compressed into fewer than 5 days. The most common schedules are 4, 10-hour days; 3 -12 hour days or two-week pay periods containing 5, 9 hour days in the first week and 4, 9 hour days in the second week.
Telecommuting	Employees working off-site who may be electronically linked to the office through a computer.
LESS THAN FULL-TIME	Options that allow employees to work less than 40 hours per week.
Part-time	Option that allows employees to work less than 40 hours per week.
Job-sharing	A form of regular part-time work in which two people share the responsibilities of one full-time job with salary and benefits prorated. It differs from regular part-time work in that it requires a team approach to performing job responsibilities.
V-time	Voluntary reduced work-time programs allow full-time employees to work a reduced number of hours for a specified period with a corresponding reduction in pay.
Phased or partial retirement	Option for older workers to reduce the number of hours worked for a period of time before retirement.
Leaves	Unpaid or paid time-off for personal reasons which would include dependent care, educational leave, or other reasons.
DEPENDENT CARE	Options that help employees meet child and elder care needs.
Referrals	Option that helps parents find dependent care providers in the area through counseling and referrals.
Parenting information	Company provides information on parenting skills to employees.
Child-care discounts	Company contracts with a local child-care provider to offer discounts to their employees.
On-site care	Company establishes a dependent care center on or near the premises.
Sick child care	Company provides child care to sick children when that illness prevents parents from using their traditional care-giver.
Dependent care spending accounts	Program that allows employees to pay for dependent care with pre-tax dollars.
Work-family manager	Human resource position that serves as an information source for employees on meeting work and family needs.

Full-Time Work

Full-time work innovations consist of the options available to employees for completion of a 40 (or 35 depending on the company) hour work week in a non-traditional format. These innovations are designed to reduce time-based work-family conflict since both number of hours and schedule inflexibility can produce work-family conflict (Pleck et al., 1980). There are three major forms of full-time work innovations: flextime, compressed work week, and telecommuting, with each having variations across companies.

Flextime. These are schedules that permit employees to choose their starting and quitting times within boundaries set by management. Typically, there are hours when all full-time employees must work, 'core hours,' and hours when employees can exercise some discretion, 'flex hours.' The three most common plans are: (1) staggered group hours (e.g. the finance department begins at 8:00 am and the marketing department begins at 9:00 am); (2) staggered individual hours where the employee establishes a work schedule in advance; and (3) flexible work days where the employee establishes his or her own work schedule each day subject to the limitations of core hours (Kopelman, 1986). In addition, some companies allow a 'banking component,' which allows employees to work one long day (e.g. 6 a.m. to 8 p.m. on Monday) and to then work only during the core hours on the other days (Noe, Hollenbeck, Gerhart, & Wright, 1994).

The first known implementation of flextime occurred at Messerschmidt-Bölkow-Blohm, a German aerospace company, in 1967. By 1969, there were an estimated ten companies in Germany using flextime; and by 1974, there were 3000. Current estimates of European usage of flextime range by country from 10 to 40 percent of the work force (Thierry & Meijman, 1994). Flextime was first introduced in the United States at Control Data Corporation in 1972 (Kopelman, 1986). Flextime has now grown in United States and in the late 1980s around 5 million U. S. employees were using flextime (Ralston, 1989). Flextime was imported to the United States largely in response to concerns about traffic congestion and energy conservation but it has been used for more than just these purposes (Friedman & Galinsky, 1992). Bohen and Viveros-Long (1981) in a study of 325,000 employees found that flextime users spent more time with their families, more time on household chores, and more time involved with their children's school activities. The freedom to set their own schedules also enabled employees to spend less money on child-care services.

Research on flextime suggests that it has no consistent effect, either good or bad, on productivity, but research has consistently shown that it reduces absenteeism and tardiness and increases employee satisfaction (Pierce, Newstrom, Dunham, & Barber, 1989). Dalton and Mesch's (1990) field experiment found that flextime significantly reduced absenteeism during the one-year experimental period and that when the flextime was removed, absenteeism rates for the following two years returned to their original higher

level. They did not, however, find any long term impact on turnover. Two field experiments have shown an increase in job satisfaction after the introduction of flextime (Orpen, 1981; Ralston, 1989). Other researchers have more pessimistically concluded that the favorable organizational and personal benefits of flexible schedules have either not been obtained, or have been kept "hidden from scientific literature" (Dunham, Pierce, & Castaneda, 1987, p. 236).

Compressed work weeks. This schedule option is a standard work week that is compressed into fewer than five days. The most common schedules are four 10 hour days, three 12 hour days or two-week pay periods containing five 9 hour days in the first week and four 9 hour days in the second week (Olmsted, 1992). The compressed work week became more common during the early 1970s when the number of companies using compressed work weeks jumped from 40 in 1970 to 3000 in 1973. Participation has been estimated at two percent of the American work force today (Thierry & Meijman, 1994). According to Colligan and Tepas (1986), the compressed work week prevails in the government and utility sector, in the construction and health industries, and in the service sector in general.

From the employees' perspective, a compressed work week may be desirable because weekly travel time is reduced and having a non-weekend day off each week may make it easier to schedule doctor's appointments, parent-teacher conferences, and other non-work/non-home chores. Three day

weekends may also make some activities, especially those involving travel, easier (Noe et al., 1994). Opportunities may arise for more education and training time and also for a better recovery from fatigue caused by work (Colligan & Tepas, 1986).

From the organization's perspective, the compressed work week is believed to reduce the costs of starting and stopping work (e.g. set-up and close-down procedures or daily documentation for manufacturing plants) since they only have to be completed four times for every 40 hours of work rather than five times (Kopelman, 1986). A compressed work week may also allow a company to extend its operating time and, consequently, provide more service or make better use of costly equipment. Also, personnel may be employed at hours that better match fluctuating market demands, as with peak retail hours (Thierry & Meijman, 1994). In addition, company absenteeism and tardiness are lower with compressed work weeks because there is less pressure for employees to schedule important non-work events during the work week (Kopelman, 1986).

Dunham, Pierce, and Castaneda (1987) studied a group of nurses, medical technicians, and clerical help who changed from a traditional five day 40 hour schedule to a four day 40 hour schedule. After operating on the new schedule for four months, the subjects returned to the traditional schedule. Data showed that changing toward the compressed schedule significantly improved only one client service measure out of seven effectiveness measures but that an additional five indices moved in an improved direction. After

returning to the five day schedule, six service indices showed a decline. Pierce and Dunham (1992) found positive employee reaction to a compressed work week and Dunham et al. (1987) found that the more experience employees have had with a compressed work week, the more positive their attitudes towards them were, especially when either Monday or Friday was the additional day off.

Kopelman (1986) summarized the compressed work week literature by stating that there is no evidence the compressed work week improves productivity and noted that work quality may actually decline as a result of fatigue. Historically, these schedule innovations have been implemented with lower level and unionized employees in mind (Dalton & Mesch, 1990) but there has been a dramatic growth in their availability to managerial and professional staff (Kossek, Barber, & Winters, 1993).

Telecommuting. Telecommuters are employees who work at home rather than in the office either full-time or a few days a week. Employees who telecommute work off-site and may or may not be linked electronically to the office through a computer (Olmsted, 1992). Improvements and cost reductions in computers and communication technology, as well as the growing number of 'information workers,' have made home work increasingly feasible (Shamir, 1992) but relatively few employees choose this option even when it is made available to them (Perin, 1990). Today, 26.6 million Americans are sometimes engaged in job-related work at home and more than 500 large American

organizations have formal work-at-home programs with nearly 1 million employees participating (Shamir, 1992).

The advantages of telecommuting for employees are reduced commuting time and high flexibility in work hours since parents can work some hours after children have gone to bed or are at school. Telecommuting parents do note that this option does not preclude the need for child care assistance, since it is often difficult to simultaneously monitor children and work productively (Friedman, 1990a). There are organizational advantages to telecommuting, as well, since companies may be able to reduce office size and overhead. One Canadian survey of employers named reducing costs, improving efficiency, and the nature of the work done as the main reasons for implementing telecommuting (Solomon & Templer, 1993).

Additionally, many employers will find themselves forced to implement telecommuting since the Federal Clean Air Act (CAA) Amendments of 1990 will require companies with 100 or more employees to reduce employee commuting by 25 percent by 1996 through telecommuting, car pooling, or public transportation subsidies in eleven targeted zones across the United States. These zones include the most populated urban regions in the United States including the New York, Los Angeles, and Chicago metropolitan areas (Bronson, 1993).

Hall's (1990) review of telecommuting reached several conclusions about for whom and when telecommuting is appropriate. It is most appropriate for

employees with low social needs and modest career goals. It also seems most suitable for positions that do not require intensive communication with other employees and do have a high intrinsic motivational potential, such as computer programming or accounting. Finally, telecommuting may be a more successful and viable option when it is only part-time, with the remaining time in the office. Despite these constraints regarding when it is appropriate, one study found similar job satisfaction levels between telecommuters and traditional employees (DuBrin & Barnard, 1993).

In summary, research on full-time work options has found no strong effect for productivity measures but the programs may increase employee satisfaction and reduce absenteeism. In addition, the programs may not be appropriate for all work situations.

Less Than Full-Time Work

The second category of life balance innovations is less than full-time work options. These include those arrangements for employees who work something less than 40 hours a week, in one of several forms: regular part-time, job sharing, v-time, phased retirement, and leaves. These innovations may also be most appropriate for time-based conflict. The contingent work force which includes part-time employees, as well as temporary employees has become the fastest growing segment of the labor market and now totals 35 million workers or 25 percent of the labor force (Reynolds, 1994). Part-time workers alone

account for 20 percent of the work force; (Feldman, 1990) more than twice the percentage as in the 1950s (Kahne, 1985).

Regular part-time work. Part-time workers are those permanent employees who work less than full-time on the company's regular payroll. Surveys have indicated that individuals under age 25, and females, are heavily represented in the ranks of part-time workers (Friedman, 1990a). Most part-time jobs are semiskilled or unskilled and can be found in retail, banking, and service industries. Manufacturing firms employ part-time workers on a much smaller scale (Thierry & Meijman, 1994).

Employers offer part-time options as a way to keep valued employees who want to work fewer hours, and to reduce company labor costs (Friedman, 1990a). A survey by Catalyst (1983) found that women prefer part-time work as a transition to full-time work following maternity leave. The utilization of part-time workers has several potential advantages for an organization including increased scheduling flexibility, lower labor costs, potential reduction in turnover costs, increased employee satisfaction, and aid in meeting affirmative action goals (Eberhardt & Shani, 1984). An employing organization is able, through part-time employment, to adjust its labor force to varying production requirements and to possibly attain higher productivity levels since economists have found that working a small number of hours typically increases productivity per hour (Thierry & Meijman, 1994). Data on absenteeism and

part-time work and data on turnover and part-time work are equivocal (Cohen & Gadon, 1978; Levitan & Belous, 1979).

One consequence of part-time work for employees is that the wages paid to them are frequently much lower than those paid to equivalent full-time employees on a per hour basis (Ermisch & Wright, 1993). Additionally, part-time employees frequently have lower job security and few or none of the benefits that are typically available to a firm's full-time workers (Olmsted, 1992). Still, one study of nurses, found that part-time employees reported a higher level of overall job satisfaction than full-time employees at the same hospital. The authors attributed some of the part-time employees' satisfaction to their receiving pro-rated benefits, which reduced the pay differential between full and part-time employees (Eberhardt & Shani, 1984). One advantage to part-time employees is that they may be able to choose hours that allow them to better meet outside demands (Thierry & Meijman, 1994).

Job sharing. Job sharing is a form of regular part-time work in which two people share the responsibilities and hours of one full-time job with salary and benefits prorated between them. It is helpful for employees because it is a way to create part-time employment opportunities where there is a need for a full-time position (Friedman & Galinsky, 1992). It differs from regular part-time work in that it requires a collaborative approach to performing job responsibilities and it allows for greater continuity than regular part-time work because partners can trade time or fill in for each other (Olmsted, 1992). Another desirable feature of this arrangement and an advantage for the

organization is that the pair of employees often complement each others' strengths and weaknesses so that the performance of the pair is better than the performance of either individual working alone would have been (Pierce et al., 1989). In one study of job-sharing and part-time work, Mattis (1990) found that 68 percent of the firms studied reported that these programs had positively affected retention.

V-time programs. V-time programs are voluntary reduced work time programs. Under v-time programs, full time employees can reduce work hours for a specified period of time with a corresponding reduction in compensation (Olmsted, 1992). This program can provide employees with greater flexibility. For example, employees may choose to reduce their work hours up to 20 percent with an equivalent reduction in salary — these reduced hours could be used to shorten the work week or to add additional vacation days. Employers can use v-time to reduce their labor costs. In a study of a v-time program's acceptance by employees, Kossek, Barber, and Winters (1993) found that acceptance of the program was positively related to being female and negatively related to the employee's having used the program previously.

Phased or partial retirement. Phased retirement is an option for older workers to reduce the number of hours worked for a period of time before retirement (Olmsted, 1992). It is offered as a means of easing employees' transitions into retirement (Noe et al., 1994) and of improving the retention of valued, older employees (Andrews, 1992). These phased retirement policies

may be especially valued by executives to whom the end of a career may be more of a change, both in lifestyle and in status (Louchheim, 1990). One problem with phased retirement is that the cost of health insurance premiums may make the use of phased retirement less attractive than it would otherwise be to the company (Andrews, 1992) and the reduced pay may have reduced pension implications for the employees. Research in this area needs to be conducted especially since an aging population will make retirement issues more salient (Johnston & Packer, 1987).

Leaves. Leaves are periods of time-off, either paid or unpaid, for personal reasons which would include maternity/paternity leave and sick family member leave covered by the Family and Medical Leave Act of 1993, as well as educational leave, sabbaticals, and others. Returning employees are entitled to either their old job or one of similar responsibility. Kossek, DeMarr, Backman, and Kollar (1993) found that leaves are used more by women than by men. The leave duration typically ranges between four weeks to a year with a leave of five to twelve weeks being the most common. The primary disadvantages with leaves include productivity losses, difficulties in covering absent workers' jobs, and the stigma of low career expectations for managers and professionals who choose to take these leaves (Kossek, DeMarr, Backman, & Kollar, 1993).

Kossek, Barber, and Winters (1993) found that employee acceptance of a corporate leave program was positively related to being an upper level

manager, being young, and believing that there are negative consequences associated with using this program. Leave acceptance was found to be negatively related to having used a leave, being a supervisor, being racially similar to your group, and to being female in an upper level work group. Kossek, DeMarr, Backman, and Kollar (1993) found employees did not think that leaves were a very effective way of addressing elder care concerns.

In summary, the research on less than full-time work has found these programs may help create employment opportunities for employees who might otherwise leave. Some programs have increased employee satisfaction while leave programs have elicited some negative reactions.

Dependent Care

Dependent care policies and innovations are those company sponsored programs that either directly provide care to employees' children or elderly dependents, or help employees find care. This care is considered a legitimate business concern by many since a significant number of employees are parents. Duxbury et al.'s extensive (1992) study of Canadian workers found that 70 percent of male survey respondents were parents and 62 percent of female respondents were parents. Approximately 20 percent of workers currently care for elderly relatives, with intensive care being provided by approximately 6-8 percent of workers (Friedman, 1991).

The manner in which companies have chosen to address these dependent care needs has changed in the last few decades. Friedman and Galinsky (1992)

wrote that of the 100 companies providing child care in 1978 in the United States, nearly all offered on-site care, which is now the least popular option. Today, almost two-thirds of companies surveyed by Hewitt & Associates (1990) offer some kind of child care assistance to their employees, typically dependent care spending accounts and referral services. Much of this assistance was instigated by tax changes that specifically allowed employers to set aside part of an employee's salary and place those pre-tax dollars into an account that could be used to pay for various benefits, including child care (Goodstein, 1994). Other forms of dependent care assistance include parenting information, child care discounts, and sick child care. Research on these programs frequently describes where and to what extent the programs have been adopted rather than evaluating effectiveness.

Referrals. Referrals are listings and recommendations of reputable child care providers in the area. This service is offered to employees since even when a range of dependent care options is available in the area, parents may have difficulty finding them (Friedman & Galinsky, 1992). According to Friedman (1990b), 1,500 companies in the United States have contracted with 300 referral agencies to help parents find appropriate care but research has not well documented the effectiveness of this program.

Parenting information. Many companies choose to provide information to employees about parenting through occasional parenting seminars covering a range of topics from finding care to disciplining children. Others sponsor

parent support groups or keep parenting information and videos in the company library. Some companies also provide parenting information through their employee assistance programs (EAP) and a growing number of firms have expanded their EAPs beyond substance abuse to include a wider range of family concerns (Friedman & Galinsky, 1992).

Child care discounts. To help employees reduce the cost of purchasing child care services, employers may contract with individual vendors to provide a discounted price. Discounts are typically offered by child care chains that hope to fill empty spaces through the use of these discounts and corporate relationships. Other companies discount child care costs by offering vouchers to employed parents, although many only provide this benefit to low income families (Friedman & Galinsky, 1992).

On-site child care. On-site or near-site child care is when employing organizations provide and maintain a child care center either in or near the work place. The first on-site child-care center in the United States was created during the Civil War by a uniform manufacturer as a way to entice women to help in the war effort. In the South in the 1920s, child care was often provided to the female employees of men's clothing plants. The biggest child care initiative was at the Kaiser Shipbuilding Yards in Portland, Oregon during World War II where the company clothed and sheltered employee children, year-round, 24 hours a day (Miller, 1984). During World War II, the Latham Act (1941) provided federally supported centers for the children of mothers

working in war industries (Cook, 1989). When the war ended, however, the 2,800 child care centers were closed (Miller, 1984).

Child care benefit expansion slowed during the 1950s despite the growing labor force participation of women. During the 1960s, a few companies established child-care centers in the community as a way to meet demands for corporate social responsibility. Limited experimentation with child care occurred during the 1970s, but it was not until the 1980s that serious attention to dependent care arose, especially as governmental spending on social services was reduced (Friedman & Galinsky, 1992) and increasing numbers of employees reported having difficulty finding child care (Galinsky & Hughes, 1987). In addition, in 1981, the Economic Recovery Tax Act provided depreciation benefits (the ability to account for the costs of aging equipment) for employers creating on-site child care centers in an effort to motivate greater private sector investment in child care (Goodstein, 1994).

Friedman's (1991) review of the on-site child care literature suggested that on-site care seems to improve recruitment and retention, and Auerbach (1988) said that these recruiting and retention findings were the major reasons for providing child care. Kossek and Nichol (1992) found that on-site child care users had more positive job attitudes than employees not using the center, but that on-site child care use was unrelated to performance and absenteeism measures. This finding was consistent with prior reviews of child care and

absenteeism and child care and performance (cf. Goff et al., 1990; Milkovich & Gomez, 1976; Miller, 1984).

Sick child care help/time-off. Rather than investing in full-time, on-site child care, some organizations have created sick child care centers or emergency day care homes that care for mildly ill or recuperating children when illness makes normal care unavailable (Morgan & Milliken, 1992). Another variation of sick child care sends a trained child care worker to the child's home. A third variation revises the company's sick leave policy to include sick child care as a permissible sick day (Friedman, 1990a). The advantage of these programs for employees is that although most employees have multiple child care arrangements (Galinsky & Hughes, 1987) these arrangements are most likely to break down when the child is sick, since many child care centers do not admit sick children. In addition, employees may be unwilling to take their children away from their home when the children are sick (Friedman & Galinsky, 1992). The advantage of these programs for organizations is that they enable employees to be at work rather than at home (Parker & Hall, 1992) and they create employee goodwill (Friedman & Galinsky, 1992).

Dependent care spending accounts. Changes in the Internal Revenue Code made child care a nontaxable benefit and permitted employers to offer a choice in benefits. Dependent care spending accounts enable employees to use pre-tax dollars to purchase dependent care services (Friedman & Galinsky, 1992). These spending accounts may also be used for elder care provided that

the aging relative lives in the employee's home and that the employee provides more than 50 percent of the elder's financial support (Friedman & Galinsky, 1992). Galinsky (1989) found, however, that dependent care spending account usage remains low and attributed this low usage to four features: (1) salary reduction plans are most useful to a small group of high income employees; (2) employees are unable to use both a dependent care account and claim a dependent care tax credit; (3) the complexity of federal regulations governing these accounts causes red tape for reimbursing employees; and (4) the program requires employees to predict their dependent care expenses one year in advance. A final negative feature is that any overestimated funds are not refundable (Department of Labor, 1993). These plans may be popular with organizations, however, since the organizations incur no cost with dependent care accounts other than their administrative cost (Kossek, DeMarr, Backman, & Kollar, 1993).

Work/family manager. This position has been created by some companies to centralize and coordinate the companies' work-family policies. These work-family managers are expected to keep employees aware of services and benefits (Martinez, 1990). Appointing a work/family manager also serves the purpose of embodying the company's commitment to work-family concerns. The appointment of a work/family manager is usually an outgrowth of a needs assessment and program development (Johnson & Rose, 1992). Some companies, rather than appointing a single manager have established a work-

family issues committee made up of human resource managers to research work-family concerns (Osborn, 1993).

In summary, research on dependent care has documented that the programs are frequently used for recruiting and have wide employee acceptance. For many programs, however, the effectiveness of these programs in terms of productivity, absenteeism, and turnover is unknown.

Life Balance Research Implications

All of these scheduling and dependent care benefits have a common purpose: to help employees cope with work-family conflict and meet outside obligations. A variety of innovations exist since work-family conflict can take many forms — time, strain, and behavior based conflict (Greenhaus & Beutell, 1985), because outside obligations vary in magnitude and flexibility, and because different companies have different business needs. The research that has been described on these innovations has had very mixed results both within a single innovation and across innovations. As researchers have tried to explain these innovations' impacts on dependent variables such as absenteeism, turnover, and satisfaction, they have found positive, negative, and non-significant relationships. This inconsistency has been found, even among widely adopted and relatively intensely studied innovations like flextime (Thierry & Meijman, 1994).

Because of the range of results, it has been impossible for researchers to clearly claim that any or all of these innovations are a success or a failure. Obviously, some contingencies in the organizational context where the

innovations are being adopted are impacting the innovations' success in easing work-family conflict. In order to make recommendations on innovation adoption and to better understand how these innovations impact dependent variables of interest, it is first important to understand the contextual/organizational predictors of life balance innovation adoption.

THEORETICAL FRAMEWORK AND HYPOTHESES

Chapter Overview

This chapter will introduce the need for theory-driven life balance innovation research. Two theories are offered as explanatory frameworks and hypotheses for each theory are developed and presented.

Theory-Driven Research

Several researchers have called for the consideration of organizational level constructs as significant influences upon the adoption and use of particular human resource management practices (Jackson & Schuler, forthcoming; Jackson, Schuler, & Rivero, 1989; Saari, Johnson, McLaughlin, & Zimmerle, 1988; Terpstra & Rozell, 1993). Socio-technical research has shown that changes made at individual and group levels do not often survive very long unless they are compatible with the larger organizational structure or unless concurrent changes are made in the larger structure (Trist, 1981). By studying human resource policies at the organizational level, the field will be better able to integrate human resource practices with corporate strategy and corporate profitability (Terpstra & Rozell, 1993). Jackson and Schuler (forthcoming) argue that industry and organizational characteristics have been infrequently incorporated into research paradigms yet may have broad implications for human resource management, beyond those typically measured at the

individual level. The choice of which organization level constructs to study, should be guided by research and theory.

Thierry and Meijman's (1994) review of time based innovations, which included flextime and compressed work weeks among others, noted that research in this area has not been very theory-driven to date. For this dissertation, two theories: human capital theory and institutional theory will help to shape the explanation of which organizations choose to adopt life balance innovations. These theories are proposed to be complementary. Jackson and Schuler (forthcoming) in a review of organizational theories and their implications for human resources noted:

> [T]he available theories are admittedly inadequate. Each deals with pieces of the larger phenomenon and none addresses the whole domain of HRM in context. Thus, in the near future, the best work will be informed by multiple theoretical perspectives. (p. 17-18)

The following section will take this form: an overview of human capital theory; hypotheses based on human capital theory that predict which organizations will adopt life balance innovations; and as an alternative and as a complement institutional theory and institutional hypotheses will be presented.

Human Capital Theory

The premise of human capital theory is that people possess knowledge, skills, and abilities that have economic value for firms. This economic value is similar to the value of plants, equipment, and other assets typically considered capital. Human capital studies at the organizational level intend to show how organizations make decisions about their human capital. Companies choose to

invest in their employees because they believe that such investment will be rewarded with increased productivity or other valuable returns (Becker, 1976).

Human capital theory states that investment in human capital can take two major forms: general training and specific training. General training is training that gives an employee a skill for which there are many buyers such as writing skills. Specific training is training that will increase an organization's productivity but is less likely to increase an employee's market worth (Becker, 1976). Because general training increases an employee's market worth, the costs of general training are typically borne by the employee (i.e. trade school or college tuition costs). Because specific training, by definition, only benefits the employing organization and does not make the trained employee any more attractive in the market place, the cost of specific training is borne by the employer. Specific training might include how to use a custom computer package, or a restaurant-specific cash register.

Employers recoup their investment in specific training by paying employees something less than the employees' marginal revenue product (the extra revenue that the firm receives because the worker is more productive after training). Employers are, however, likely to pay more than the market wage for these specifically trained employees. This higher wage is necessary to lower the probability that these employees will leave since this turnover would force the employer to pay for the training of replacements (Becker, 1975).

Unlike other forms of capital (e.g. plant and equipment) firms do not actually own human capital — it is embodied in employees who are free to move from one firm to another (Becker, 1975). Because of this mobility, employers are likely to engage in activities which reduce the turnover of specifically trained employees since their value is higher than the value of potential employees available in the marketplace. The mobility of employees means that any investments made in innovations intended to improve retention such as pensions or to increase motivation such as bonus plans should be considered human capital investments (Flamholtz & Lacey, 1981). This has meant that human capital theory has been extended beyond education and training to have implications for improved selection measures (Cascio & Zammuto, 1987), compensation practices (Wallace & Fay, 1988), advanced management techniques (Snell & Dean, 1992), and human resource practices in general (Flamholtz & Lacey, 1981).

The value of any human capital investment — whether it is training, improved selection measures, or improved recruiting — depends upon the contribution of the employees to the firm. The higher the potential for employee contribution (i.e. the larger the difference between low and high performers), the more attractive human capital investments will be (Becker, 1976). As an example, salespeople can vary greatly in their performance, with direct economic rewards for high performance. Alternatively, human capital investments in industries with little potential for increased employee

contribution may produce surplus human capital that will be very costly to a firm (Tsang, Rumberger, & Levin, 1991). This differing potential for employee contribution means that there will be differences between types of organizations in their investments in human capital — either through training or through other human resource innovations which improve and retain human capital.

Human Capital Hypotheses

Life balance innovations are an investment in human capital if it is believed that a financial stake in these innovations will be rewarded with either a valued return, such as reduced turnover, increased productivity, or reduced absenteeism or protection for investments already made. The rate of return will vary by company since their respective industries vary in the potential contribution of their human capital (Becker, 1976). Industries that rely on new discoveries and innovations for their success such as biomedicine may be highly reliant on their human capital, while more staid industries may be more reliant on their ability to control costs. This return will also vary since organizations choose disparate strategies that rely differently on the role of human versus other forms of capital. Organizations with value systems similar to Peters and Waterman's 'productivity through people' will probably view employees' work-family conflict as more important than will organizations which view employees as replaceable commodities, and do not consider the value of their human capital when making policy decisions (Mattis, 1990). Organizations will also vary in the degree to which their work force is susceptible to work-family

conflict and in the degree to which the consequences of work-family conflict is economically damaging to the business.

The following hypotheses all describe organizational characteristics that predict a company is likely to protect its investment in human capital through life balance innovations. Meyer and Rowan (1977) suggest that organizations rate innovations based on how certain they are about each innovation's efficiency — the higher the need of an organization to manage work-family conflict, the more likely that life balance innovations will be an efficient choice.

The following characteristics describe companies where human capital needs are more salient or where the work force composition makes human capital and work-family conflict issues more central. The first three hypotheses are related to the business: they describe the organization's product, its labor/capital intensity, and the dynamism of the market conditions it faces. These hypotheses are followed by three hypotheses that describe the work force employed by the organization: their level of education, the amount of training provided to them, and their gender/age composition. These work force characteristics have implications both for the value of an organization's human capital and also on how likely the employees are to have a high need for these innovations because of outside and work-family demands. Finally, interactions between the business and work force characteristics are explained and presented.

Business Constructs and Human Capital Theory

Service. Human capital theory suggests that companies should only be willing to invest in their human capital if they believe that the investment will result in higher returns. Service organizations differ from manufacturing ones in several major ways. They include: an intangible product, a collaboration between customer and client in the service production and delivery process, the simultaneous production and consumption of the product (Bowen & Schneider, 1988), the difficulty in determining service quality, and an inability to inventory services (Nayyar, 1992). Because of the nature of the service sector, which relies heavily on the quality of their employees and on emotional labor, service sector companies will have an easier time recouping a human capital investment than will manufacturing companies (Wharton & Erickson, 1993).

Service organizations in this study are limited to the largest services, such as commercial banking, transportation, and utility companies such as Citibank, UAL, and PECO. The choice of large service providers eliminates small independently owned services such as local dry cleaners, hair salons, and small restaurants. Although small service organizations are also likely to have life balance concerns, they are excluded from this study because they are less likely to solve these concerns through formal human resource programs than large organizations are (Mattis, 1990; Morgan & Milliken, 1992).

For service organizations to improve the quality of their product, they must improve the quality of their employees providing the service.

Manufacturing firms, however, can improve their product through other means as well, such as investment in new equipment. Terpstra and Rozell (1993) found that service organizations were much more likely to use innovative and effective staffing procedures such as biographical information blanks (a multiple choice application blank whose answers are weighted based on their predictive abilities (Asher, 1972)) and recruitment source yield analysis (the analysis of the effectiveness of different sources of applicants (Hawk, 1967)) than were manufacturing firms. They argued the possibility that manufacturing firms put more emphasis on materials, equipment, and technology than on human resources in improving organizational performance. It has also been suggested that work-family conflict costs are especially harmful in service organizations because they invest more heavily in developing their work forces and thus high rates of resignation among women and others with a high rate of work-family conflict — represent a financial loss that is hard to recoup (Advancing Women, 1993).

The service sector also differs from manufacturing in that it requires a higher level of emotional labor. Emotional management is the self-regulation of one's expressed emotions; emotional labor is that self regulation when these activities are done for a wage (Hochschild, 1983; Wharton & Erickson, 1993). For example, service employees (more so than manufacturing employees) are frequently required to display happiness, professionalism, or some other demeanor when dealing with customers (Rafaeli & Sutton, 1987). Hochschild

(1983) studied flight attendants and found that emotional labor as expressed in outward friendliness was an important component of the training for the position and that flight attendants were taught specific techniques to increase their ability to manage their emotions. Similarly, bill collectors are expected to have a stern appearance in order for them to effectively complete their jobs. Since this emotional labor is expected by customers and/or by employers, any manifestations of work-family conflict are especially costly in the service sector, which relies upon the image of its service-givers. A failure in emotional labor may lead to lost sales and revenues. In contrast, the bulk of manufacturing employees have no regular customer contact (Bowen & Schneider, 1988) and even employee contact within the plant can be buffered by excess inventories (Bailey, 1993).

Because service organizations sell a person-centered product and because service sector employees are frequently required to manage their emotions, it is probable that they will bear a disproportionate amount of the costs of work-family conflict. These costs, which have been discussed earlier in this dissertation, may make service sector employers more aware of the phenomena of work-family conflict; especially when it directly impacts the quality of their service. Furthermore, the service industry in many cases is also already plagued with many of the work-family consequences — burnout, turnover, and absenteeism and work-family conflict problems will only increase their frequency. Human resource professionals in the service sector will therefore be

able to shape this problem as a strategic one and use that framework to gain management attention and action in the form of innovation adoption (Dutton & Ashford, 1993). It may be for this reason that Friedman and Galinsky (1992), and Morgan and Milliken (1992) both found that the first companies to implement dependent care innovations and to respond to other family needs tended to be in the service sector.

> H1: Service organizations will be more likely to adopt life balance innovations than manufacturing firms.

Labor/capital intensity. Labor intensity is the amount of organizational sales earned per employee. When companies vary in labor intensity versus capital intensity, they are varying in the degree to which human capital is important compared to other forms of capital. Because of the variance from labor intense to capital intense, we would expect different levels of investment in human capital. Competing hypotheses are offered for this construct because the arguments for each seemed equally plausible.

It is first proposed that labor intensive organizations (those with fewer sales dollars per employee) would invest more heavily in life balance innovations since human capital equals a larger percentage of their total capital (i.e. labor composes more of a textile manufacturer's total capital than in capital intensive organizations such as petroleum refiners). If organizations are labor intense, because it is more difficult in their respective industries to replace human workers with equipment, their limited innovation investment

opportunities (limited because they rely so heavily on human capital) may also make them more likely to adopt life balance innovations.

> H2a: The more labor intensive the organization is, the greater the adoption of life balance innovations.

It may be, however, that the capital intensive firms are actually the ones that are most likely to adopt life balance innovations since the relative paucity of employees means that these benefits can be provided to each employee at a relatively low cost to the company as a whole, if the cost of the innovation per employee is compared to their sales amounts. Also, with only a few employees, the organizational costs of work-family conflict including absenteeism (Blegan et al., 1988), work overload (Cooke & Rousseau, 1984), and burnout (Bacharach et al., 1991) may be felt more intensely in capital intensive organizations since there are so few employees. Capital intensity may also require greater training making the loss of employees more costly and retention more important. All of these may increase the need for innovations which manage and ameliorate this conflict. Additionally, stress and other work-family consequences may be higher in these companies since single employees may be responsible for equipment worth millions of dollars.

> H2b: The more capital intensive the organization is, the greater the adoption of life balance innovations.

Environmental dynamism. Environmental dynamism is the variability within an industry's market (Keats & Hitt, 1988). Environmental dynamism refers to the rate of change in industry sales and the unpredictability of that

change (Dess & Beard, 1984). This change, especially if it is unpredictable, will frequently increase the amount of attention that an organization pays to external and industry cues (Aiken & Alford, 1970), in addition to serving as a stimulus to action (Damanpour & Evan, 1984). As the environment changes quickly and sales volume jumps, organizations are forced to make dramatic changes in order to remain efficient (Dass, 1993; Meyer, Brooks, & Goes, 1990). One way that companies respond is through the adoption of innovations. Dynamism in the industry environment has been shown to be related to innovation adoption in general, and to dependent care innovation adoption specifically.

Several studies have shown that dynamism predicts innovation. Kanter (1983) found that companies in dynamic industries are much more likely to adopt new innovations than companies operating in stable markets. Lawler, Mohrman, and Ledford (1992) found that the adoption of employee involvement innovations, such as team building and job redesign, was strongly related to the companies' perceptions of a short product schedule and increased foreign competition. Because of the uncertainty of what will happen and what innovation might be helpful, companies often invest in multiple areas (Damanpour, 1991), including in human capital, in the hopes that one innovation may prepare them for future conditions.

Several studies on dynamism have shown the positive relationship with child care benefits. Kraut (1992) demonstrated that child care is positively correlated with industry dynamism, especially in industries which often

experience tight labor markets for professional/managerial employees. Milliken, Dutton, and Beyer (1990) also found that industry dynamism predicted child care adoption. Kossek, Dass, and DeMarr (1994) found support for their proposal that companies operating in stable industry environments will be more resistant to child care innovation ideologies than organizations operating in uncertain environments. This hypothesis will extend the findings to predict that it relates to all life balance innovations, and not just those related to child care. In addition, environmental dynamism may promote life balance innovation adoption as a coping mechanism for the organization to buffer their human capital from change by lessening turnover and improving recruiting.

> H3: The more dynamic the organization's environment, the greater the adoption of life balance innovations.

Work Force Characteristics and Human Capital Theory

In addition to being affected by business need characteristics, life balance innovation adoption is also hypothesized to be affected by work force characteristics since these characteristics can impact the value of an organization's human capital or how a company should best work to retain that human capital.

Education. The education construct is the level of education possessed by the employees of an organization and relates to the human capital concept of general training. The level of organizational education will impact life balance innovation adoption in two ways: through increased awareness of life balance

innovations available across firms and through the increased costs associated with both recruiting and retaining a highly educated work force.

Pierce and Delbecq's (1977) review of innovation explained why education level is related to innovation adoption in general. They suggested that highly educated employees bring with them a richness of ideas, self-confidence, input from outside sources, boundary spanning activities, and standards of the profession — all of which contribute to the innovation process. These characteristics all increase the chance that information about life balance innovations will be brought into the firm. They further predicted that the education level of both staff and of administrators would be related to innovativeness — not just the education level of top employees.

Flamholtz and Lacey (1981) explained that recruitment, replacement, and retention costs are all considered human capital investments because they are financial investments that will be rewarded with either improved human capital or reduced costs of turnover. Milliken et al. (1990) reported that the majority of firms and industries that have adopted life balance innovations have a highly skilled and mobile work force such as in health care services. A more highly educated work force will have greater bargaining power to get desired benefits since they frequently have more external options than less educated work forces and would have more knowledge of these options (Mattis, 1990). Rynes and Barber (1990) suggested that one strategy for improving recruiting was to improve the nature of the inducements offered. They named as possible

inducements high salaries, improved benefits, flextime, and child-care/eldercare, among others. They suggest that these changes many of which are focused on work-family concerns are much easier ways of improving recruiting than changes in supervision or other culture changes.

Since organizations with highly educated employees are marked by the higher value of human capital, replacement costs for those organizations are correspondingly high (Morgan & Milliken, 1992). Companies may choose life balance innovations to reduce turnover and keep replacement costs low. Kossek and Nichol (1992) found that the presence of on-site child care improved retention and recruitment but did not have a strong impact on performance.

> H4: The more educated the work force, the greater the life balance innovation adoption.

Training. Human resource training and development is the process of creating or enhancing the work-related skills of a company's work force and is the same as the human capital concept of specific training. The training and development of a company's human resources increases the value of the employees to the organization because it increases their capacity to render services which possess economic value (Flamholtz & Lacey, 1981). Training is a traditional focus of human capital theory which suggests that firms invest in skill development when they expect these investment costs to be offset by increases in employee productivity (Snell & Dean, 1992).

Training should be predictive of life balance innovations since companies that invest heavily in human capital through training will want to keep those

employees, and keep them productive through life balance innovations. Williamson (1981) argues that the deeper, the more specialized, and the more company-specific an employee's skills are to an employer, the more dependent the employer is on the employee. The higher the training costs the more important the recruitment and retention of workers will be (Morgan & Milliken, 1992).

> H5: The more the company spends on training, the greater the adoption of life balance innovations.

Work force composition. The final work force characteristic is demographic. Depending on the demographic make-up of an organization's human capital, the organization will make different decisions on how to maintain that capital. Several studies have suggested that the gender and age composition of an organization's work force is likely to impact its investment in life balance innovations. Although the U. S. labor market is moving towards greater diversity in terms of gender, race, and age (Johnston & Packer, 1987), it is moving unevenly with some organizations, occupations, and levels still having markedly different compositions (Jackson & Schuler, forthcoming). This composition may impact the efficiency or likelihood of a life balance innovation decision.

Although men have begun to take on increased dependent care responsibilities, there is strong support for the argument that women are still the primary care-givers and primary users of alternative work schedules. Goff

et al. (1990) found that the correlation between being female and being the primary care giver to dependents was .73. Bedeian et al. (1988) found for female subjects (but not for male subjects) that the relationship between parental demands and life satisfaction was mediated by their satisfaction with their child care. Kossek (1990) found that employees who are female and are not managers tend to show the greatest concerns about child care issues. Furthermore, women have also been shown to feel more work-family conflict in their lives (Duxbury et al., 1992; Gutek et al., 1991; Kelly & Voydanoff, 1985).

In addition to having greater family needs, female employees are also much more likely to use alternative scheduling options. Mattis (1990) found flexible arrangements tended to be located in functions that were over-represented by females and that women were much more likely to use part-time work and job-sharing options. Kossek, DeMarr, Backman, and Kollar (1993) found that leaves are used more by women than by men.

Because women are the primary care givers and because women use more alternative schedule options, the percentage of women in a given workforce has impacted companies' decisions to adopt life balance innovations (Goodstein, 1994; Morgan & Milliken, 1992). Milliken et al. (1990) reported the majority of early adopters of life balance innovations have been organizations and industries that employ a relatively high percentage of women who are of child-bearing age.

The ability of working women to influence organizational policies is likely to increase as a function of the dependence of employers on female employees (Cook, 1989; Goodstein, 1994; Hyland, 1990). The greater the dependence, the more responsive the industry must be. Goodstein (1994) found the percentage of female employees strongly affected employer response to pressures to start work-family initiatives — both day care and schedule innovations, but he found the proportion of parents did not affect the response. Morgan and Milliken (1992), however, did not find the percentage of employees that were female predicted adoption.

> H6a: The greater the percentage of females in the work force, the greater the adoption of life balance innovations.

Although less researched, workforce age has also been related to companies' decisions to adopt life balance innovations. Employees who are young are much more likely to have higher family obligations than either middle-aged or older employees since child care obligations are most demanding when children are young (Kossek, 1990). One study at Mobil Oil found employee age was a much more important determinant of work-family conflict than gender. The study found that younger employees, both male and female, were more concerned about work-family issues and were less likely to relocate than older employees (Mattis, 1990).

> H6b: The lower the average age of employees in the work force, the greater the adoption of life balance innovations.

Both workforce age and percentage of female employees seem to have made companies more likely to adopt life balance innovations. Above and beyond these direct effects, however, I expect that when both these pressures are in place — youth and majority female — that companies will be especially responsive. I predict that age and percentage female will interact such that life balance adoption at young female companies will be much higher that at firms that are either older and female, or which have a majority male workforce regardless of age. It is the interaction of these two composition descriptors that will make this salient because family concerns are weaker for the three other categories of employees by gender and age:

1. Older females who may have had strong family demands at one time, but whose children are now grown
2. Older males who are less likely to have family concerns by nature of their age and sex
3. Young males who are also less likely to have these concerns.

H6c: The greater the percentage of females and young workers in the work force, the greater the adoption of life balance innovations.

Human Capital Theory Interactions

Capital intensive x work force composition interaction. Although life balance innovations would be relatively inexpensive for any capital intensive company (since by definition the amount of revenues per employee is high) only those companies with a highly female work force that is young will be likely to adopt them. The small size of these organizations' work forces means

these organizations will be easily able to survey their employees to find out which innovations are most appropriate for them. These organizations will know what interventions must be completed to maintain the value of their human capital. Only in the case of predominantly female and young work forces, would the work forces name life balance innovations as the benefits that they would like to have provided. The innovations would likely be named since this work force typically has a high need for flexibility and the capital intensive nature of the business, and the small number of employees, may intensify these feelings as well as the costs of work-family conflict. The greater the percentage of employees who are female and young, as well as the smaller the work force, the more it behooves the human resource department to tailor the benefits to them. Likewise, if the business is capital intense, but does not have a work force that is female nor young, the human resource department needs assessments should determine life balance innovations are probably not the most appropriate innovation to adopt.

> H7: Adoption of life balance innovations will be greater for capital intensive organizations with a high percentage of females and young workers in the work force than for capital intensive organizations without such a work force.

Education x work force composition interaction. Adoption of life balance innovations will also be contingent on the interaction between education and work force composition. Those organizations that are highly educated and hence have valuable human capital **and** have a work force that is predominantly

female and young (such as in nursing, education, and increasingly accounting) will be more likely to adopt the innovations. Highly educated companies without a predominantly female and young work force would be less likely to invest in these innovations since other innovations or benefits would be much more effective in improving the recruitment and retention of these employees than life balance innovations would be. An educated work force is also more likely to be vocal and knowledgeable about which type of benefits will keep them from turning over. For a female and young work force, a needs assessment would likely indicate that life balance innovations are an appropriate innovation choice. Similarly, if the work force is mostly male or middle-aged or older, but is educated, the preferred innovations will likely be something else. Poorly educated female work forces may be the least likely to receive life balance innovations since management may be unconcerned about turnover in a work force that has a low level of power to negotiate for these benefits.

> H8: Adoption of life balance innovations will be greater for highly educated organizations with a high percentage of females and young workers in the work force than for highly educated organizations without such a work force.

Institutional Theory and Hypotheses

The previous hypotheses all follow what Abrahamson (1991) called an efficient-choice perspective. This perspective assumes organizations make rational choices about which innovations to adopt based on a clear picture of their own corporate goals and an understanding of each innovation's ratio of outputs to inputs. This model cannot, however, explain companies' rejection of efficient or effective innovations or the adoption of inefficient or ineffective ones (Abrahamson, 1991; Abrahamson & Rosenkopf, 1993). Institutional theory may be useful in these instances to explain why companies adopt the innovations they do and why they do not adopt innovations that seem appropriate to their structure and work force. As noted earlier, some valid human resource innovations like biographical information blanks have had only modest levels of introduction (c.f. Terpstra & Rozell, 1993) while others with relatively low validity such as quality circles have been broadly introduced (Lawler & Mohrman, 1985; Steel & Lloyd, 1988).

Meyer and Rowan (1977) described institutionalization as a process such that over time, organizational actors create an accepted framework of what is the "right" or legitimate way of doing things. As the number of organizations making individual decisions to adopt an innovation increases, the innovation becomes increasingly infused with value, regardless of the level of value based on its technical merits. Organizations are then forced to adopt the innovation to avoid losing legitimacy (Selznick, 1957). DiMaggio and Powell (1983) expanded

this idea to suggest that certain actors are able to shape this framework through coercive sanctions, normative pressures, and mimetic influences.

Coercive isomorphism. Coercive isomorphism is the similarity in actions by industry members that results from political pressures by institutional agencies. These agents have the power to write or at least influence rules and regulations that impact organizations. These agencies are principally agents of the state, at local or national levels; various legal entities; and professional associations that establish accreditation policies (Scott & Meyer, 1991). For example, Baron, Dobbin, and Jennings (1986) showed how government war-labor boards forced the diffusion of personnel administration innovations during World War II. One example of life balance coercive isomorphism may be the passage of the Family and Medical Leave Act of 1993 (FMLA) which mandates that employers with 50 or more employees within a 75 mile radius must provide employees with up to 12 weeks of unpaid leave for dependent care (Noe et al., 1994). Although this legislation may have positive outcomes for employers (e.g. reduced turnover, improved employee satisfaction, etc.), the outcomes of the legislation were defined by an external agency, in this case the U.S. Congress, rather than by the organizations who must now establish leave policies that comply with the legislation (Scott & Meyer, 1991). When the government mandates that leaves must be offered to employees, any competitive disadvantages associated with having leaves are eliminated. No hypotheses are offered for this FMLA example of isomorphism since its legal

background means that there will be no variance in innovation adoption due to coercive isomorphism — all companies will adopt all innovations required by law. Scott (1987) refined DiMaggio and Powell's (1983) concept of coercive isomorphism into two subgroups — imposition by means of authority versus imposition by means of coercive power. He further posited that the former would be adopted with less resistance and more rapidly. While the Family and Medical Leave Act reflects institutionalization by means of authority, unions may be an example of the second coercive power subgroup.

Coercive isomorphism can come about from the pressures of unions and other strong stakeholders who push for innovations' adoption through coercive measures. Unionization is expected to act as a coercive influence on employers because historically, several schedule innovations have been implemented with lower level and unionized employees in mind (Dalton & Mesch, 1990). In addition, some unions such as the Communications Workers of America, the United Auto Workers and the International Ladies Garment Workers have begun to include work and family issues in their bargaining platform (Morgan & Milliken, 1992).

> H9: Companies with a higher percentage of unionized workers will adopt more life balance innovations than companies with a lower percentage of unionized workers.

Normative isomorphism. Normative isomorphism is the similarity in industry member decisions because of similar values. It relates to the introduction of values and beliefs into the work place, such that over time, these

values or the activities affiliated with them come to be taken for granted as ends in themselves. This cognitive process leads to a shared definition of social reality (Scott & Meyer, 1991). Recent Fortune (Fierman, 1994), Wall Street Journal (Small Steps, 1993) and Business Week (Roush, 1993) pieces on work-family conflict issues, as well as reports by Catalyst and other organizations on 'Family Friendly Employers' may be shaping a norm of employer-provided family benefits. This growing awareness and publicity mean it may no longer be necessary to justify the adoption of these innovations, either to executives, stock holders or other stake holders, since, as they develop over time, they become more infused with their own value (Scott & Meyer, 1991).

In addition, Abrahamson (1991) suggested that one reason organizations adopt innovations is for symbolic reasons — the innovations project an image that the company wants. These symbols may have economic value alone. For example, an innovation that makes an employer appear innovative or ethical may help the organization attract customers or investment capital. For example, Stride-Rite, a manufacturer of children's shoes, has received considerable press for its combined child/elder care centers in Massachusetts (cf. Laabs, 1993). This press may be especially valuable for a company selling to parents who are likely to have child care concerns of their own.

The 1993 edition of The 100 Best Companies to Work for in America, differed from the original 1984 edition in the emphasis it placed on work/family concerns. The authors noted that between editions: "Many of the

companies in this book have made tremendous strides towards dealing with the problems of working mothers and fathers, offering a variety of child care options and flexible benefits" (Levering & Moskowitz, 1993, p. xii).

A company's reputation is the degree to which an organization is perceived as prestigious and successful in the eyes of others in the industry. As shown by The 100 Best Companies to Work for in America, the definition of what is 'best' is changing; the new definition takes into account a growing awareness of work/family concerns such that companies considered to have a positive reputation are more likely to be those that have adopted life balance innovations.

> H10: The more positive the organization's reputation, the greater the adoption of life balance innovations.

Mimetic isomorphism. Finally, mimetic isomorphism is the similarity in industry members' decisions that occurs when organizations adopt innovations or engage in practices to model themselves after competitors deemed successful or legitimate (DiMaggio & Powell, 1983). Institutional theory says organizations cannot be thought of as isolates that make independent decisions without outside influence (Abraham & Rosenkopf, 1993). If organizations see that successful or prestigious organizations have adopted life balance innovations, they too may adopt these innovations as a way of gaining legitimacy.

Institutional theorists argue that as time passes, structures and practices become more institutionalized and may be adopted regardless of an organization's specific characteristics or needs (Scott, 1992). Scott and Meyer (1991) show organization-specific features such as organizational structure typically become less predictive of the adoption of a new practice or innovation as time passes.

Institutional theory would predict once life balance innovations have been adopted by one or more firms in an industry, other firms in the industry will adopt them for mimetic reasons. It is this mimetic tendency that leads to innovation fads. Unlike government agencies and labor unions, 'fashion-setting' organizations in an industry do not have coercive power. Instead these organizations' power to influence adoption, emanates from their capacity to inspire other organizations, usually those in the same industry, to trust their choice of innovations to adopt, and to imitate them (Abrahamson, 1991). Johns (1993) explained industrial psychology innovations are frequently imitated within an industry before diffusing to other industries. For example, structured interviews (interviews where the interviewer follows a set procedure rather than following the applicant's lead (Latham & Saari, 1984)) may have been started by one company, copied by other companies in the industry since transfers occur more frequently between like companies, before becoming common in other industries. This mimetic process was supported in Goodstein (1994) whose study of flexible schedules and child care options in Washington

state found that adoption in the same industry and in the same county significantly predicted organizational adoption.

> H11: The greater the industry level of life balance innovation adoption, the greater the adoption of life balance innovations by individual companies.

Institutional/Human Capital Interactions

Two interactions between institutional and human capital variables follow which predict when the influences of institutions will be the strongest. Institutional theorists have posited that in general, mimetic adoption is strongest during periods of intense change and is most common among service organizations looking for tangible legitimacy. Two hypotheses will test whether mimetic life balance innovation adoptions are also more common in these circumstances.

Institutional theory and environmental dynamism. Organizations are most likely to imitate other organizations under conditions of uncertainty. During these times of change, organizations base their decision of which administrative technology to use on the decisions of other organizations (DiMaggio & Powell, 1983; Thompson, 1967). An increase in an industry's dynamism means that it becomes more difficult to make adoption decisions based on an innovation's merit or its expected return (Meyer & Rowan, 1977). Under these circumstances, the mere fact that many organizations have adopted an innovation and not an individual organization's assessment of its efficiency and expected return becomes the cue that it is normal or legitimate for

organizations to use this innovation (Abrahamson & Rosenkopf, 1993). According to this perspective, organizations' decisions revolve less around which innovation they should adopt and more around which organization they should imitate (Abrahamson, 1991).

Uncertainty in the environment means that when companies are unaware whether an innovation will be appropriate in the future, they may engage in the adoption because it might be appropriate and if it is appropriate, companies do not want to have missed the opportunity to have gained its benefits (Abrahamson & Rosenkopf, 1993).

> H12: The more dynamic the environment and the higher the industry level of life balance innovation adoption, the greater the adoption of life balance innovations.

Institutional theory and service. Much of institutional research has emphasized the degree to which service organizations are more likely to be susceptible to the influences of others and to have a higher need for perceived legitimacy. Selznick (1957) first purported that companies that were more specialized and technical were seen to be less susceptible to institutional influences than those lacking these features — as most service firms are. Meyer, Scott, and Deal (1981) explained that the similarity in education systems (a service sector industry) is based on similarities in institutionally defined beliefs rather than any particular organizational structures. Scott and Meyer (1991) noted the attention paid by educational institutions to appearances and processes in order to gain legitimacy. This legitimacy is gained by conforming

to widely shared cultural practices (Meyer, Scott, Cole, & Intili, 1978). These arguments of imitation can be extended to most service sectors which place an emphasis on the normative pressures of professional culture and the coercive forces of accreditation (Scott & Meyer, 1991). Among the numerous service fields requiring certification are accounting, cosmetology, real estate sales, and health care professionals.

Because service sector organizations are more susceptible to institutional pressures and because they rely more heavily on non-technical systems predominated by their human capital concerns, once an industry norm for adoption or non-adoption is established, others in the industry will follow. This creation of a norm about life balance innovation follows Zucker's (1983) description of institutionalization as the process such that a common understanding is developed about what is appropriate and meaningful behavior.

H13: Service organizations will be more influenced by their respective industry level of life balance innovation adoption.

METHODS AND PRELIMINARY ANALYSES

Chapter Overview

To test this dissertation's hypotheses, two data sources and two primary approaches were used. Survey data from Fortune 500 and Fortune Service 500 executives were combined with archival company information. Quantitative data were used as an indirect approach to answer this dissertation's questions and to investigate to what degree the theories explain life balance innovation adoption. A qualitative open-ended question was used as a second and more direct approach.

This chapter will begin by describing the pilot test that was used to create the survey. This will be followed by a description of the survey sample and then by the characteristics of the respondent sample. Explanations of the dependent variable and the independent variables are presented. The data analytic technique — multiple hierarchical regression is presented and justified as is the qualitative approach. Finally, as a precursor to presenting the regression and qualitative results in the next chapter, preliminary analyses will be provided which address power concerns, missing data, regression residuals and multicollinearity within the data.

Pilot Test

As a pilot test for the survey, a series of phone interviews were conducted with fifteen human resource employees in a cross-section of

industries to ensure that the items and innovation descriptions reflected current life balance terminology. These conversations increased my understanding of the life balance issues that companies are currently facing and provided insight into ways to make the survey clearer and shorter. Their feedback was incorporated into the final survey. The pilot participants, which were a convenience sample of human resource employees, were from 10 organizations, five of which are in either the Fortune 500 or the Fortune Service 500. Forty percent of the pilot organizations were manufacturers and 60% were service organizations.

Survey

Toutelian and Gaedeke (1987), in a follow-up to an earlier study on Fortune 500 mail surveys, recommended in order to improve response rates that surveys to top executives should be brief, well-designed, easy to complete, and should be on a topic of interest to the executives. To help meet these recommendations, a short (two-page) survey was designed, a pilot test to ensure that it was understandable was conducted, and a cover letter which explains life balance innovations' relevance to human resource executives was attached. Copies of the survey, cover letter, and follow-up letter are available in Appendix A.

Sample

The final survey and an explanatory letter were sent on January 10, 1995 to 950 companies in 27 industries. A follow-up reminder letter was sent two

weeks later on January 25, 1995 to 930 non-respondents. The surveys were returned in usable form by 167 respondents. To follow is a description of the sample of 950, as well as a description of the 167 member respondent sample.

Survey sample. Surveys were sent to vice presidents or directors of human resources for the Fortune 500 and the Fortune Service 500 companies that were in industries with ten or more firms listed in the April 1994 and May 1994 publications respectively. Both lists are based on 1993 sales. Companies are assigned to these lists based on whether the majority of their revenue comes from manufacturing or service products and whether they were among the largest providers of the product. Fortune magazine organizes companies into industries which are similar to, but not identical to, the two-digit Standard Industrial Classification codes and these industry designations represent the primary economic involvement of the firms (Fombrun & Shanley, 1990).

Fortune 500 Categories:

Aerospace	Apparel	Beverages	Building Material
Chemicals	Computer	Electronics	Food
Forest/Paper	Furniture	Industrial Equipment	Jewelry
Leather	Metal Products	Metals	Mining
Motor Vehicle	Petroleum	Pharmaceutical	Publishing
Rubber/Plastic	Scientific	Soap/Cosmetics	Textiles
Tobacco	Toys	Transportation Equipment	

Fortune Service 500 Categories:

Diversified Services	Commercial Banking	Diversified Financial
Savings Institutions	Life Insurance	Retailing
Utilities		

Companies in the following seven industries were excluded because each had less than ten members listed in the Fortune rankings: Apparel, Building Materials, Jewelry, Leather, Tobacco, Toys, and Transportation Equipment. In addition, two firms were subsidiaries of other listed firms and shared a human resources executive with the main company — in these instances a single survey was sent to the parent company.

Names and addresses of the company vice presidents were obtained from the 1994 edition of Hunt-Scanlon's Select Guide to Human Resource Executives. In cases where more than one human resource executive was listed in the directory, the more senior of the two was chosen (i.e. senior vice president versus vice president). In cases where more than one human resource executive at the same senior-most level was employed, one was picked at random.

Respondent sample. Fifteen of the 950 mailed surveys were returned to sender due to incorrect addresses or outdated manager names. Of the 935 firms that received the questionnaire, 168 returned it for a response rate of 18.0 %; an additional ten companies wrote back that they had a company policy that forbid them from completing non-governmental surveys. Tomaskovic-Devey, Leiter, and Thompson (1994) in a similarly sized sample found that 16% of the companies surveyed had such a policy. One of the returned surveys was unusable. Of the usable surveys, 72 companies (43% of the total) returned the survey from the first wave of mailings. Ninety-five companies (57%) returned the survey from the second wave of mailings.

Although the surveys were sent primarily to vice-presidents, the titles of the employees who filled out the survey were more varied. Forty-five were vice-presidents, four were assistant vice presidents, 27 were directors, 39 were managers, eight were administrators, 34 had other professional/managerial titles, and ten gave no title. They represented a variety of human resource functions. Seventy-eight identified themselves with only human resources, 27 with compensation/benefits, 18 with work/family concerns, 14 with employee relations, nine with training, two with diversity management, four with other human resource areas and ten did not indicate an area. There were no significant differences between firms where a vice president completed the survey and firms where a non-vice president completed the survey in regards to the dependent variable ($t=1.57$, $p=.12$), sales ($t=.46$, $p=.64$), number of

employees (t = 1.8, p = .07), or rating on the Fortune Reputation Survey (t = .48, p =.63)

Forty-six percent of the respondents were male. They had an average 13 years tenure with their current employer and an average 4.7 years tenure in their current position. Exploratory t-tests did reveal some significant relationships between the respondent variables and the dependent and independent variables. Companies that returned the survey in the second wave had a lower score on the dependent variable (t = 3.11, p = .002), lower sales (t = 2.09, p = .04), and were likely to have spent less on training (t = 2.83, p = .01). Male respondents had a longer job tenure (t = 2.08, p = .04) and company tenure (t = 2.16, p = .03) on average.

Although the response rate (18%) was somewhat low, a comparison of the firms that did and did not respond to the questionnaire suggests they were similar in several regards. Analyses indicated that there were no significant differences between respondent firms and non-respondent firms in terms of sales volume (t = 1.90, p = .60), number of employees (t = 1.88, p = .06), or reputation (t = .53, p = .60). There were, however, some differences in response rates across industries — see Table 3.

Table 3
Response Rates by Industry

INDUSTRY	Surveys Mailed	Usable Surveys	Response Rate
Aerospace	17	5	29%
Beverages	10	3	30%
Chemicals	47	8	17%
Computer	27	5	19%
Electronic	44	9	20%
Food	49	7	14%
Forest/Paper	34	6	18%
Industrial Equipment	32	5	16%
Metal Products	16	4	25%
Metal	26	3	12%
Mining	12	3	25%
Motor Vehicle	22	6	27%
Petroleum	32	12	38%
Pharmaceutical	15	1	7%
Publishing	20	3	15%
Rubber/Plastic	12	1	8%
Scientific Equipment	21	4	19%
Soap/Cosmetic	12	1	8%
Textiles	13	0	0%
Diversified Services	100	11	11%
Commercial Banking	100	21	21%
Diversified Financial	50	10	20%
Savings Institutions	50	8	16%
Life Insurance	50	6	12%
Retailing	50	5	10%
Transportation	50	8	16%
Utilities	50	12	24%
TOTAL	950	167	18%

Response rates ranged from 0% for Textiles and 7% for Pharmaceuticals to 30% for Beverages and 38% for Petroleum with a total mean response rate of 18% for the survey. There was not a significant difference between service and manufacturing response rates, nor between capital intensive and labor intensive firms. The industry differences do not seem to be systematic. Because the differences do not appear to be systematic, it is difficult to ascertain the impact of the industry response rate differences on the results. These unequal response rates may distort the data if industries previously shown to be especially active in life balance innovation are disproportionately included. Significant industry differences in life balance adoption were found by Morgan and Milliken (1992) where being in health care; finance and insurance; and utilities were all positively related to adoption. My own response rates for diversified financial and utilities were somewhat higher than the total mean of 18% while for life insurance the mean was somewhat lower, I suspect the impact of these differences to be slight since they may in fact have canceled one other out.

Measures

To follow is a description of the construction of the dependent variable, the independent variables, and an open-ended qualitative measure. Reliability data are included where it is available. Data were collected from both the mail survey and from archival Fortune reports. Table 4 presents the source (survey or archival) and collection date of the various measures.

Table 4
Data sources and collection dates

Approach	Variable	Source	Collection Date
	Life Balance Innovation Adoption (DV)	survey	January 1995
Quantitative	Sales	survey Fortune reports	April/May 1994
	Service/Manufacturing	Fortune reports	April/May 1994
	Labor/Capital Intensity 1993	survey Fortune reports	January 1995 April/May 1994
	Environmental Dynamism	Fortune reports	April/May 1990 April/May 1991 April/May 1992 April/May 1993 April/May 1994
	Education	survey	January 1995
	Training	survey	January 1995
	Work Force Composition	survey	January 1995
	Unionization	survey	January 1995
	Reputation	Fortune reports	February 1994 (reported) (collected September-December 1993)
	Industry Innovation Adoption	survey	January 1995
Qualitative	Qualitative Question	survey	January 1995

Reliability of measures. Reliability of measurement is the degree to which measures are stable, consistent, repeatable, and free from random errors of measurement (Kerlinger, 1986). In order to get an estimate of the reliability of the survey items, four methods were used. First two archival items: number of employees, and 1993 sales were asked on the survey to look for reliability of responses. Second, respondents were asked to mail any program description brochures that they had. These brochure offerings were compared to the company's survey response to ensure that the programs they reported having and those they reported not having were in fact offered or not offered. Third, companies that had a work-family manager, were asked to provide this manager's name. This work-family manager was phoned to verify survey results. Finally, companies without a work-family manager, but with multiple human resource executives, had a second survey sent to one of the other executives on March 20, 1995. The similarity in responses between the multiple respondents (either the two executives or the first executive and the work-family manager) was compared. Kumar, Stern, and Anderson (1993) in a study of conducting organizational research strongly recommended the use of multiple informants from each firm as a means of assessing information reliability.

Nearly all of the 167 surveys were included in the sales and employee size reliability check and 45 companies (over one-fourth of the sample) were included in one of the other three methods. All of these checks were designed to assess if the

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subjects answered the survey accurately and as intended. Results for these checks are reported after each variable's measurement description in the following section.

These checks to the reliability and validity of the data were used instead of traditional measures of reliability such as coefficient alpha, because of the factual nature of the items and because the items in the dependent variable by definition are not internally consistent (i.e. 'have you adopted flextime' is not another way of asking 'have you adopted an on-site dependent care center) although in practice the innovations may serve as imperfect substitutes for one another (i.e. having an on-site dependent care center may preclude the need for some employees to use flextime). The use of a reliability measure such as coefficient alpha would be inappropriate in this case since coefficient alpha is based on the internal consistency of the items (Cortina, 1993).

Dependent variable. One dependent variable was developed that included all of the life balance innovations including: full-time, less than full-time, and dependent care because these innovations were seen as substitutes for one another across sub-sets. The dependent variable was calculated as the number of programs that the company offered out of a possible 18 listed on the survey. The possible range on this dependent variable is 0.0 to 18.0.

The dependent variable scores for this study ranged from 2 to 17 and the frequency plot of the dependent variable indicated that the distribution of scores was normal. Normality means that 68.3% of the distribution lies between + 1 standard deviation and - 1 standard deviation (Leabo, 1976). For

my data set, 74% of the data points were within this range. The median score on the dependent variable was 9.0 and the mean was 8.99. The standard deviation was 3.50. A further examination of the dependent variable's component program means is available in Appendix B. This expanded examination also includes information collected from the survey on year of adoption and extensiveness of availability.

The author acknowledges that this dependent variable construction is one of many ways that life balance innovation adoption could have been measured. The structure of this dependent variable was chosen since it allowed companies to respond to life balance concerns with a wide range of innovation options. Morgan and Milliken (1992), who used a similar, but not identical dependent variable, wrote:

> The goal was to 'score' a company much as an employee or prospective employee might, giving higher marks to those companies that did a better job of meeting the needs of their workers. This is a problematic task, since different employees have different needs, and those needs change as their financial and family circumstances change. (p. 234)

It was felt by the author that this scoring method made a better acknowledgment of the variety of ways of meeting employee needs than a categorical variable would. Goodstein (1994) for example used a dependent variable that recorded if the company had a single innovation, multiple innovations, or no innovations. Because adoption could reasonably be measured in other ways and because differently measured dependent variables

could impact results, other dependent variables were also considered as detailed below.

One alternative dependent variable was constructed such that in addition to the 18 innovations on the list, innovations that survey respondents wrote-in as other programs offered were also counted. A description of the operationalization of this dependent variable follows and results are presented in an appendix.

The written-in programs were content analyzed by the author and another graduate student to ensure that they were not in fact one of the 18 programs listed on the survey. This dependent variable structure is a hybrid of two approaches to organizational innovation research — closed list and case study which were described by Aiken and Hage (1971). The list of eighteen programs is the closed list — an a priori list of innovations that the companies could have adopted. The open-ended innovation question "What other life balance programs do you offer?" more closely follows the case history approach where the definition of criteria of inclusion are established and adopted innovations are included if they meet those criteria. The criteria used for inclusion in this study were:

1. the innovation did not overlap with one of the 18 listed innovations
2. the innovation did not overlap with another innovation named in the open-ended list
3. the program was a voluntary human resource innovation — one where participation was optional
4. the program appeared to have the goal of improving an employee's ability to achieve life balance in their roles as worker, parent, family member, or member of the community.

This categorization allowed several programs, which may not directly address dependent care concerns or scheduling issues, to be considered part of life balance innovation because they were still designed to improve the workers' quality of life and hence help them achieve life balance. This use of an open-ended question allowed for the possibility that additional life balance innovations existed in practice but had not yet been captured in the human resource literature or were only in place at a few companies and not yet widely known.

This version of the dependent variable could range from 0.0 to 18.0, with a higher score possible if a company had adopted all 18 innovations, as well as other innovations not named on the survey. Sixty-three companies named additional programs and the two content coders agreed in 98% of the cases on how many programs were named. See Appendix C for a list of the other programs which have been adopted by respondents. The mean on the additions was 1.08, the standard deviation was 1.82 and the number of additions ranged from zero to eight. The results that were received when using this variable are included in Appendix D.

Appendix E describes two further conceptualizations of life balance innovation adoption dependent variables — one weighted by availability and one broken into innovation sub-sets, as well as their creation and the results received when they were used. Despite differences in the construction of and the philosophy associated with these three alternative dependent variables —

open-list, weighted, and sub-sets — the results differ only slightly from those received from the closed list of 18 innovations.

Dependent variable reliability. In applied research the dependent variable is the major concern and since research is written to explain the dependent variable (Schwab, 1980), it was on the dependent variable that the majority of the reliability investigation was focused. Twelve companies provided brochures which described their life balance innovations. In all twelve cases, the survey had all 18 programs identified as either available or not available in the same pattern as the brochure for 100% agreement. This agreement was calculated by the author who read through each brochure looking for program descriptions. Check marks were made for each match and totaled. Thirty-two companies named their work-family manager but in 16 of these cases it was the work family manager who had filled the survey out. When the work family manager had not completed the first survey, phone interviews were initiated and they were completed with twelve of these managers. These phone interviews asked whether the companies had any of the 18 programs on the survey. The mean agreement on the eighteen programs between the work-family managers and the survey respondent was 16.4 or 91% agreement. The agreement range was 14 to 18.

Twenty-one companies were represented with two surveys. For these surveys, the mean agreement on the dependent variable was 16.4 or 91%. The agreement range was 15 to 18 programs.

For all three methods of rating the reliability of the dependent variable - brochure, work/family manager, and second survey, inter-rating reliability exceeded 90 percent.

Independent variables. Three categories of independent variables (control, human capital, and institutional) were used in this study. Each of these categories will be defined, its measurement will be explained, and for some variables reliability information will be provided.

Control variable. The control variable size was included because it is correlated with other independent variables in the model and has been found to be a strong predictor of adoption in several studies (c.f. Kraut, 1992; Mattis, 1990; Morgan & Milliken, 1992; Rynes & Boudreau, 1986; Saari et al., 1988; Terpstra & Rozell, 1993).

Sales[1]. Total 1993 company sales was used for this variable.

Sales reliability. The survey responses regarding sales were compared to sales information published in Fortune. The correlation between the written-in and actual sales was only .40. One possible explanation is that some respondents filled in profits not sales on the survey. The correlation between the questionnaire response and actual profit was .63. This .63 was higher than the sales dollar correlation and also higher than the correlation between actual sales and actual profits (r = .55) further suggesting that some respondents did include the profit amount not the sales amount. The large difference in many cases between survey

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[1] For the following service industries the dollar value of assets held was used instead of sales: savings institutions, commercial banking, diversified financial, and life insurance.

reported and actual sales makes it less likely that they were reporting sales for another time period.

Human capital variables. Human capital variables related to business characteristics are: being in either the service or manufacturing sector, labor/capital intensity, and environmental dynamism. Human capital variables which look at the organization's work force are: education level, training investment, and work force composition (which includes main effects and the interaction between percent of the work force that is male and the average age of the work force). Three-way interaction terms were computed between labor/capital intensity and work force composition and between education and work force composition. It is worth noting that human capital variables include both direct measures of human capital as well as measures of company characteristics which may increase the importance of human capital to the company.

Service/manufacturing. Industries were coded (1 = service, 0 = manufacturing), based on their primary economic involvement. This involvement was determined by the percentage of sales that come from services versus from manufacturing and by whether they were listed on the Fortune 500 or the Fortune Service 500.

Labor/capital intensity. Total 1993 company sales were divided by company employment numbers to calculate sales/employee.

Employment numbers reliability. The correlation between the company employment number variables (survey and actual reported in Fortune magazine) was .98 and the two variables had similar means, standard deviations, and ranges.

Dynamism. Dess and Beard (1984) created this measure of environmental dynamism which reflects variability in the industry environment of an organization. Dess and Beard (1984) and Keats and Hitt (1988) explained that environmental dynamism, or the degree of change in industry sales, can be measured by taking the standard error (S_{b1}) of the regression slope coefficient in the munificence/growth equation:

$$Y_t=b_0+b_{1t}+e_t;$$

where
- Y = industry sales at time t
- b_0 = intercept
- b_{1t} = beta (regression coefficient)
- t = year
- e_t = residual

Industry sales information for the five year period 1989-1993 was analyzed. The decision to use five data points was based upon the length of the typical planning horizon (Keats & Hitt, 1988). Using the standard error gives a measure of the dispersion of sales from the regression equation. The greater the dispersion, the higher the dynamism since growth is less predictable.

Education. Per Damanpour (1991) this is the measure of the percentage of employees with a certain educational background or level of professional training. For this study, companies were asked to identify the final education level breakdown for their work forces. Points were assigned to each level (less

than high school = 1, high school graduate or GED equivalent = 2, some college = 3, four year college degree = 4, graduate degree = 5) and were weighted by the percentage of employees attaining that level. The measure is the sum of those weighted points and can vary from 1 to 5.

Training. This measure was calculated as the total dollar amount spent by the company on employee training and development.

Training reliability. The training budget mean difference between the twelve multiple surveys was $992,000. The correlation between these two surveys was equal to $r = .85$ and was significant at the $\alpha < .01$ level.

Work force composition. Work force composition included both main and interaction effects. The main effects were percent of the workforce that is male and average age of the work force. The interaction between these two composition variables was calculated:

(percentage male x average age)

In the regression, the main effects of percent male and average age were entered before the interaction term.

Work force composition reliability. For percentage male, the mean difference between multiple survey responses was 9%. The correlation between these two surveys was equal to $r = .69$ and was significant at the $\alpha < .01$ level. For mean age, the mean difference between multiple survey responses was 1.9 years. The correlation between these two surveys was equal to $r = .82$ and was significant at the $\alpha < .01$ level.

Institutional variables. The institutional level variables looked at unionization, reputation and adoption by other organizations in a firm's industry. The institutional interactions looked at the interaction of adoption by other organizations with environmental dynamism and at the interaction of adoption by other organizations with being in the service sector.

Unionization. This variable was the percentage of the work force that is represented by a union.

Unionization reliability. For unionization, the mean difference between multiple survey responses was 3 percent. The correlation between these two surveys was equal to $r = .97$ and was significant at the $\alpha < .01$ level.

Reputation. The Fortune Corporate Reputation Index is a survey of ratings from more than 10,000 experts — executives, directors, and financial analysts, who are asked to assess the reputations of the ten largest companies in their respective industries. The annual survey has a fifty percent response rate (Fombrun & Shanley, 1990). Fortune 500 companies were assigned by Fortune magazine to a group based on the activity that contributed most to their 1992 industrial sales; Service 500 companies to a group based on the activity contributing most to their 1992 service sales. Each company is rated relative to its leading competitors on eight characteristics: long-term investment value; financial soundness; wise use of corporate assets; quality of management; quality of products or services; innovativeness; ability to attract, develop, and keep talented people; and community/environmental responsibility (Welsh,

1994). The scores are on an 11 point scale (0=poor, 10=excellent). Although the measure has eight attributes, analyses have shown the ratings are actually uni-dimensional. Fombrun and Shanley (1990) found that the overall measure had an alpha of .97. Their varimax factor analysis of the eight attributes in the 1985 survey extracted a single factor with an eigenvalue of 6.68 that accounted for 84 percent of the variance. This analysis, as well as factor analyses from earlier years, led them to conclude that the Fortune reputation measure was uni-dimensional and could be studied as an overall measure. All data for the February 1994 list were collected between September and December 1993 (Farnham, 1994).

Industry adoption rate. An industry mean score on the adoption dependent variable was calculated for each organization with their own score removed from the calculation so that the relationship between the industry adoption rate and the dependent variable was not inflated. This industry mean was derived from this dissertation's survey data and hence does not include information on non-respondents in the industry nor any information on non-Fortune 500 industry members.

Qualitative variable. The survey also included one open-ended question which asked "Why did your company adopt these innovations?" This question was included to increase the richness of the data and to see if any triangulation of results arose. I was interested in seeing if answers fell into the broad categories of: human capital reasons, institutional reasons, or other reasons

which I had not considered. In addition to potentially supplying support to my results, this qualitative question was also expected to be a source of insight into why this adoption occurred. The quantitative independent variables which were used in the regression model are less able to answer the question 'why' directly so much as to describe 'who' or 'what type' of firm has adopted these innovations. The qualitative question was expected to augment this study's ability to answer the question 'why' in a more direct manner.

Responses to the question asked "Why did your company adopt these innovations?" were content coded by the author and another graduate student. Responses were first examined to see how many separate reasons were listed for adoption. These reasons were then coded as belonging to one of the following categories and sub-categories: human capital (to meet employees' work/family needs, to be a flexible employer, to recruit and retain good employees); institutional (because it was the right thing to do, because the union negotiated them, for legal reasons); or other (for productivity or business reasons, other, or no answer given).

Qualitative variable reliability. It is necessary to note in regards to the qualitative question that this question was answered by a single employee in most cases. And while this question provides information regarding the adoption, as a sole source it cannot be considered a highly reliable source of information.

Analyses

Hierarchical regression. A hierarchical regression was run with six sequentially entered blocks of independent variables (control variable, human capital, institutional, human capital two-way and then three-way interactions, and institutional/human capital interactions). Per Cohen and Cohen (1983) interaction sets were entered after the main effects. Multiple regression was chosen as the data analytic technique because it allows for a dependent variable to be studied as a function of multiple variables — which were needed to test this dissertation's hypotheses and hypothesis sets. The regression was run twice — once with the human capital blocks first and the institutional blocks second and once with the institutional blocks first and the human capital blocks second. In both cases, the control variable was entered first.

Cohen and Cohen (1983) explain that the significance of a variable or a set of variables may be a function of their order of entry with earlier variables explaining more variance. Because of this, they write that order should be determined by the causal theory and what questions the author is most interested in. Control variables by definition are entered first. Size was included as a control variable since it was known to be correlated with innovation adoption (c.f. Kraut, 1992; Mattis, 1990; Morgan & Milliken, 1992; Rynes & Boudreau, 1986; Saari et al., 1988; Terpstra & Rozell, 1993) and because it correlates with several of the independent variables. These correlations could lead to spurious findings if size were not entered as a control variable. The next

two blocks, Human Capital and Institutional, were entered next because they were the variable blocks of primary interest. They were entered in two different orders so that both were tested in the more conservative third position. Position in the hierarchy affects the conservativeness of the test because the order changes what has and has not been partialed from the independent variables (Cohen & Cohen, 1983). When a block of independent variables is entered later, less variance is left to explain and previously entered independent variables may have explained variance, that the later independent variables could have explained, had they been entered earlier.

The interaction blocks were entered fourth, fifth, and sixth after their main effects and again their order was varied to increase the conservativeness of the test of significance. Cohen and Cohen (1983) do warn, however, that when choosing to place variables of least interest last (here the interactions) that "their results [be] taken as indicative rather than conclusive" (p. 172).

Preliminary Analyses

Before presenting the regression results, several facets of the data and the regression model will be described and discussed in terms of their impact upon the regression results. First, the impact of missing data and the use of missing data techniques will be described. Second, a power analysis will be provided. Third, the examination of the regression residuals will be explained and finally some multicollinearity concerns will be addressed.

Missing data. Of the 167 surveys received, many of them were returned with incomplete data in the independent variables section. (No survey with incomplete dependent variable information was used.) As a result of these incomplete surveys, missing data was a serious problem with three variables — education level, training dollars, and reputation, whose Ns were 103, 90, and 61 respectively. Power concerns forced the use of incomplete surveys. The data on these variables were missing for two different reasons. Phone calls with approximately twenty of the survey respondents revealed that the information on training and education was not easily accessible for all human resource executives and respondents preferred to keep the item blank if they did not know the answer. In many cases, training was a separate function with its own budget. Work force education information was not tracked in a central data base by some companies and hence was not easily accessible to them. Tomaskovic-Devey et al. (1994) explained that the horizontal differentiation of many large organizations "can produce a fragmentation of knowledge, thus reducing any designated individual's capacity to respond" (p. 441). This differentiation is likely to increase as firm size and firm complexity increases. Many firms, however, did chart their education and training numbers and Tomaskovic-Devey et al. (1994) explained that any increases in company formalization as evidenced through the greater use of formal records will make it more likely that an organization can respond.

The reputation score, however, was missing for a different reason. This archival variable was missing in 106 cases because these companies were simply not included in Fortune's Reputation Survey, which only scores 400 of the Fortune 500 and Fortune Service 500 companies. It was, therefore, known before the study that there would be missing data on this variable. The author decided to retain the variable because it complemented the institutional set of variables and because it was expected to be of value in predicting adoption by companies in that group of 400.

Because of this missing data, some variable intercorrelations which might have been significant with 167 cases were not significant with the reduced N (Shavelson, 1988). For instance, the correlation between reputation and average age was reasonably high ($r = -.27$), but the reduced N for this correlation meant that the power was not available to claim its significance. The power for this correlation was a low .47. The small N on the reputation variable was likely one of the contributors to the fact that it did not correlate significantly with any variables. Education and training dollars with larger Ns and hence higher power, were however, significantly correlated with other variables in the intercorrelation matrix shown in the Results chapter.

The missing data also had an impact on the regression model. In order to keep my N at its maximum level of 167, a missing data technique was necessary so that these cases were not eliminated through a listwise deletion in the regression process. The mean substitution technique involves giving all cases

with a missing value on these variables — the mean of all cases that were not missing — 6.60 for reputation, 2.89 for education, and $15,594 for training dollars. The main advantage of this technique is it is simple. The disadvantage of this technique (especially when there are so many missing cases) is that it attenuates the variance estimates and leads to a distribution plot that is more peaked because the N at the mean is artificially inflated (Roth, 1994).

To investigate how this missing data technique may have altered the regression results — three pairs of regression were run. See Appendix F for the tables of regression results as well as an analysis of the results. Each regression had the same variables as the main model but only those cases that were not missing data on the three variables — training dollars, education, and reputation were used. This led to regressions with Ns of 90, 103, and 61 respectively. The reduced power associated with these regression runs is likely to have lowered the probability of finding any significant results. Nevertheless, the results for these regression were still fairly similar to those found in the main model and in fact the R^2s were larger here.

Another missing data technique that Roth (1994) and Cohen and Cohen (1983) mention is that if a variable is missing a great deal of data, as reputation was, it could also be dropped. When reputation was dropped from the main regression model, the results were nearly identical to those in the main model. The only differences were slight changes in the beta weights. Therefore, I decided to keep this variable in the model. This regression model with the

reputation variable removed and an analysis of the results are shown in Appendix G.

Power analysis. A post hoc power analysis per Cohen and Cohen (1983) for the total regression showed that 167 surveys with an R^2 of .35 and 21 independent variables resulted in power in excess of .90 at the alpha < .05 level. The power to detect individual effects was smaller because of missing data and because the partial correlations between the dependent variable and the individual independent variables were lower than the total R^2 with the correlations ranging from .01 for reputation to .34 for training. A post hoc power analysis of the hierarchical steps showed sufficient power to detect the .20 change in R^2 for sales and the .11 R^2 change for the human capital block. There was not, however, sufficient power to detect changes in the other (and smaller) blocks.

A power analysis suggested that to maintain a power of 80, with 21 independent variable each with a $sr^2 = .01$, 258 surveys would need to be collected. Considerably fewer surveys were in fact collected.

Residuals. Regression residuals are the difference between the actual dependent variable and the predicted dependent variable. An analysis of the residuals for the regression was run to ascertain if there were any outliers. Using the rule of thumb identified in Pedhazur (1982) to consider any cases with a standardized residual greater than 2 ($z > 2.0$) as extreme, five cases were identified. These five cases were examined to ensure that no mistakes were

made in the data entry process. Once that was done, I elected to keep these outliers in the regression model since their inability to fit the regression line could not be seen as an error of measurement nor could it be determined to be the result of any misunderstanding of the survey directions. Orr, Sackett, and DuBois (1991) in a survey of Journal of Applied Psychology and Personnel Psychology authors found that the most commonly named method of outlier treatment was to discard outliers only when there was evidence of the invalidity of the data point. Few of those surveyed believed that extremity alone was sufficient cause to remove a data point.

Multicollinearity. Multicollinearity is the existence of high correlations among the independent variables and it is a concern because it produces unstable estimates of the partial regression coefficients (Shavelson, 1988). In this data set, several of the correlations between interaction terms and one of their component variables were very high. Among these are the correlation between the education and percent male interaction term and percent male ($r = .91$); the industry adoption dynamism interaction term with dynamism ($r = .90$); and the industry adoption service interaction term with service ($r = .96$).

These high intercorrelations led to violations of tolerance levels for most of the two-way and three-way interactions once one of their component variables was entered. None of the four hypothesized interactions explained a significant amount of variance in the regression. Aiken and West (1991) and Marquardt (1980) explain that multicollinearity is usually a problem with

interaction terms and their lower order terms in the context of regression. Marquardt (1980) calls this type of multicollinearity — non-essential ill conditioning and differentiates it from multicollinearity between actual variables in the population — essential ill conditioning.

A closer examination of the offending data explains to some degree why the interactions and their component parts are multicollinear. First, there were significant correlations in four cases between the variables that make the component parts of the interaction (percent male and average age, education and capital intensity, industry adoption and service, and industry adoption and dynamism) which violates the assumption of independence among the independent variables. This was worsened when these variables were then re-correlated with the component parts resulting in correlations in excess of .90 in some cases. These problems are further compounded by the fact that two of these component variables — industry adoption level and dynamism are calculated at the industry level and hence have lower possible variability since they are restricted to 27 possible levels — one for each industry (i.e. all companies in a given industry, say motor vehicles, received the same score on these two variables as all of the other companies in this industry). Finally, the possible significance of these interactions was impacted by some uneven cell sizes. For example, in the sample of 167 there are only six labor intensive companies with a predominantly older/male work force; only 19 companies are

in dynamic industries with a high level of adoption and thirdly, there are only 20 companies that are capital intensive and predominantly young and female.

Pedhazur (1982) explained that there are three methods to address multicollinearity 1. delete the offending variables; 2. collect additional data points until the multicollinearity corrects itself; or 3. use blocks of variables in the regression set-up. As explained earlier, I chose a hierarchical structure to test my hypotheses. And while Pedhazur recommends a block approach primarily when multicollinearity prevents the disentanglement of multiple variables' effects within a block, this block structure also addresses my own multicollinearity to some degree because the significance of the interaction terms (the variables where multicollinearity was an issue here) was only measured once both of its component variables had been entered. So any variance that the interaction (and the source of the multicollinearity) explained in the dependent variable, was in addition and independent of that explained by its component parts. Pedhazur (1982) further warned, however, that since multicollinearity is "symptomatic of insufficient, or deficient, information, which no amount of data manipulation can rectify" (p. 247) these methods of addressing multicollinearity are a necessary first step but not a cure.

Preliminary analyses conclusion. These preliminary analyses for missing data, power concerns, residuals, and multicollinearity were included to provide the reader with a better understanding of the data set before the presentation of the results. These preliminary analyses mean that the reader should be

cautioned in several ways. In regards to missing data and power, for the variables education, training dollars and reputation a mean substitution technique was used to keep incomplete data points and maintain sufficient power to test the hypothesis blocks. Power was weak to test individual effects. Several outliers on the dependent variable were identified by the residual analysis but none appears to be the result of error and therefore they were kept in the regression. Tolerance violations occurred for several of the interaction terms but were not a problem with main effects which were entered earlier in the regression hierarchy.

RESULTS

Chapter Overview

This chapter will provide the descriptive statistics from the data set including means and standard deviations, and a brief examination of the intercorrelations. These will be followed by both the regression results and the qualitative results.

Descriptive Statistics

Table 5 presents the means, standard deviations, and intercorrelations for the variables employed in the current study. Sample sizes vary across variables because of missing values. Correlations were conducted pairwise. The Ns on the correlation pairs range from 42 to 167.

Table 5
Means, Standard Deviations, and Correlations of Major Variables

Variable	Mean	SD	N	1	2	3	4	5	6	7	8	9	10	11
1. DV	8.99	3.50	167											
2. Service	.49	.50	167	.12										
3. Labor/Capital Intensity[1]	1.26	2.99	166	-.07	.33**									
4. Industry Dynamism	1.03	.52	167	-.12	-.74**	-.27**								
5. Education Level	2.89	.47	103	.09	-.01	.23*	.01							
6. Training $[2]	$15594	$43934	90	.36**	-.18	-.10	.05	-.04						
7. Percent Male	55%	21%	151	-.16	-.51**	-.30**	.37**	-.13	.24*					
8. Average Age of Work Force	38.58	4.47	139	-.11	-.31**	-.26**	.35**	-.07	.25*	.55**				
9. % Unionized	22%	27%	156	-.23**	-.10	-.23**	.01	-.56**	.19	.54**	-.51**			
10. Reputation	6.60	.77	61	.17	-.02	.10	.00	.07	.29	-.06	.10	-.04		
11. Industry DV	10.14	2.41	164	.19*	.24**	.25**	-.32**	.31**	-.06	-.38**	.32**	-.45**	-.14	
12. 1993 Sales $[3]	$15267	$28118	167	.40**	.21**	.14	-.20*	.07	.41**	-.15	.14	-.20*	.10	.24**

* p < .05 ** p <.01
1 Million $s in sales per employee
2 In thousand $s
3 In million $s

The dependent variable — the number of innovations adopted is significantly correlated with four of the independent variables. Companies with larger training expenditures adopt more programs (r = .36) while companies that are heavily unionized have fewer programs (r = -.23). There is also a positive correlation (r = .19) between company adoption levels and industry adoption levels and between company adoption levels and company sales (r = .40).

Being in a high adoption industry (variable name = Industry DV) was positively correlated with the individual company's being in the service sector (r = .24), being capital intense (r = .25), and having a high level of sales (r = .24). Industry adoption of life balance innovation was negatively correlated with industry dynamism (r = -.32) and with the individual company's unionization rates (r = -.45). Companies that were in high adoption industries were less likely to be predominantly male (r = -.38) or older (r = -.19).

Some of the other significant correlations give a further explanation of the sample company characteristics. Unionization was negatively correlated with education level (r = -.56), and unionized companies were also more likely to be predominantly male (r = .54) and older (r = .38). Perhaps most interesting is that training is positively correlated with average age (r = .25) although one would expect that it is younger and less experienced work forces that would actually need this training. It seems as if training is used more frequently among older workforces to prevent obsolescence rather than with young

workforces to prepare them for work. Service organizations were likely to be younger (r = -.31) as were capital intensive ones (r = -.23). Reputation was not significantly correlated with any variable.

Regression Analysis

Table 6 presents the regression results. As described in the Methods chapter, the regression was run twice. In both cases, the control variable 1993 sales dollars was entered first. In one case, the human capital variables were entered next and in the other the institutional variables were entered next. In both cases, the control variable block and the human capital variable blocks were significant, while the institutional theory block and the interaction blocks were not significant. Regardless of entry order, the blocks explained approximately the same amount of variance each time. The control variable sales explained sixteen percent of the variance. The human capital block explained 9 percent of the variance and the institutional block explained a non-significant three percent of the variance. In both regression runs, the human capital interaction blocks explained between zero and two percent of the variance and the institutional interaction block explained zero percent of the variance.

Table 6

Regression Results (Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.40**		1993 Sales $	.40**	
R^2		**.16**	**R^2**		**.16**
Adjusted R^2		**.16**	**Adjusted R^2**		**.16**
ΔR^2		**.16****	**ΔR^2**		**.16****
Human Capital Block			**Institutional Block**		
Service	.06		Percent Unionized	-.14†	
Capital Intensity	-.20**		Fortune Reputation	.07	
Industry Dynamism	-.01		Industry Adoption	.05	
Education Level	.09				
Training Dollars	.22**				
Percent Male	-.07				
Average Age	-.13				
R^2		**.25**	**R^2**		**.19**
Adjusted R^2		**.21**	**Adjusted R^2**		**.17**
ΔR^2		**.09****	**ΔR^2**		**.03**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.21*		Service	.09	
Fortune Reputation	.04		Capital Intensity	-.20**	
Industry Adoption	.06		Industry Dynamism	-.03	
			Education Level	-.01	
			Training Dollars	.24**	
			Percent Male	.04	
			Average Age	-.09	
R^2		**.28**	**R^2**		**.28**
Adjusted R^2		**.23**	**Adjusted R^2**		**.23**
ΔR^2		**.03**	**ΔR^2**		**.09****
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.10		Industry Adoption x Service	.43	
Education x Percent Male	.14		Industry Adoption x Dynamism	.35	
Education x Average Age	-.02				
CI x Percent Male	.06				
CI x Average Age	.07				
R^2		**.29**			
Adjusted R^2		**.21**			
ΔR^2		**.00**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	-.46				
Education x Percent Male x Ave. Age	.78*				
R^2		**.31**	**R^2**		**.29**
Adjusted R^2		**.23**	**Adjusted R^2**		**.23**
ΔR^2		**.02†**	**ΔR^2**		**.01**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	.36		Percent Male x Average Age	-.12	
Industry Adoption x Dynamism	.38		Education x Percent Male	.14	
			Education x Average Age	.00	
			CI x Percent Male	.09	
			CI x Average Age	-.01	
			R^2		**.29**
			Adjusted R^2		**.23**
			ΔR^2		**.01**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	-.49	
			Education x Percent Male x Ave. Age	.77*	
R^2		**.32**	**R^2**		**.32**
Adjusted R^2		**.22**	**Adjusted R^2**		**.22**
ΔR^2		**.01**	**ΔR^2**		**.02†**

† $p < .10$ * $p < .05$ ** $p < .01$

Regression results. The results will be interpreted in regards to each hypothesis. When the results differ based on the regression model used, these differences will be noted. Hypotheses 1 - 5 correspond to the human capital block, hypotheses 6 - 8 are in the human capital interaction blocks , hypotheses 9 - 11 correspond to the institutional block, and hypotheses 12 and 13 are in the institutional interactions block.

Hypothesis 1 suggested that service organizations will be more likely to adopt life balance innovations. Being a service organization did not explain a significant amount of variance. This hypothesis was not supported.

Hypothesis 2 was actually two competing hypotheses. Hypothesis 2a predicted that labor intensive organizations will be more likely to adopt life balance innovations. Hypothesis 2b predicted that capital intensive organizations will be more likely to adopt life balance innovations. This variable did explain a significant ($p < .01$) amount of variance. The negative regression sign suggests that labor intensive organizations were more likely to adopt than capital intensive firms were. Hypothesis 2a was supported.

Hypothesis 3 suggested that the more dynamic an organization's environment, the greater the level of adoption. Industry dynamism did not explain a significant amount of variance in innovation adoption. This hypothesis was not supported.

Hypothesis 4 predicted that the more educated the work force, the greater the adoption. This variable did not explained a significant amount of variance. This hypothesis was not supported.

Hypothesis 5 suggested that the greater the training expenditures, the greater the adoption. Training dollars spent did explain a significant amount of variance at the $p < .01$ level. This hypothesis was supported.

Hypothesis 6a predicted that the more predominantly female that an organization was, the greater the level of innovation adoption. Hypothesis 6b predicted that the younger than an organization was, the greater the level of innovation adoption. Hypothesis 6c predicted an interaction such that the more predominantly female and the lower the average age, the greater the level of adoption. Neither the main effects for percentage female and average age nor their interaction (average age x percent female) explained a significant amount of variance. These hypotheses were not supported.

Hypothesis 7 predicted that adoption would be greater for capital intensive firms with a female and young work force than it would be for capital intensive organizations without such a work force. This three way interaction (capital intensity x percent male x average age) did not explain a significant amount of variance in innovation adoption. This hypothesis was not supported. An examination of this interaction showed a very small population ($N = 3$) for the labor intense and young/female cell which would contribute to the non-significant findings for this interaction.

Hypothesis 8 suggested that adoption would be greater for highly educated work forces that were predominantly female and young than it would be for highly educated work forces that were not predominantly female and young. This three way interaction (education x percent male x average age) did explain a significant amount of variance in innovation adoption at the ($p<.05$) level but the interaction was not interpretable. This hypothesis was not supported.

Hypothesis 9 suggested that the greater the degree of unionization, the greater the adoption of life balance innovations. Unionization explained a significant amount of variance ($p < .05$) when the institutional block was entered after the human capital block and explained a significant amount of variance ($p < .10$) when the institutional block was entered first. The sign of the beta weight suggested that unionization is negatively related to innovation adoption. This hypothesis was not supported.

Hypothesis 10 suggested that organizations with more positive reputations were more likely to adopt life balance innovations. Company reputation level did not explain a significant amount of variance in innovation adoption. This hypothesis was not supported.

Hypothesis 11 predicted that the greater an industry's level of adoption, the greater the adoption for the organizations in that industry. The industry level of adoption did not explain a significant amount of variance in innovation adoption. This hypothesis was not supported.

Hypothesis 12 predicted an interaction such that the greater the environmental dynamism and the higher the industry level of adoption the greater the adoption of life balance innovations. This interaction did not explain a significant amount of variance. This hypothesis was not supported.

Hypothesis 13 predicted that service organizations would be more influenced by their respective industry life balance innovation adoption levels than manufacturing firms would be. This interaction did not explain a significant amount of variance in innovation adoption. This hypothesis was not supported.

Results of Qualitative Data

The author and another graduate student content coded the responses to the question "Why did your company adopt these programs?" Their agreement on the coding was 89%. When there were disagreements, the coders conferred and decided upon one of the disputed categories. The results of this content coding are shown in Table 7.

Table 7
Qualitative Response Categorizations Frequencies & Percentages

Reason		Frequency	Percentage
Human Capital	To meet employees' work/family needs	91	54%
	To recruit and retain good employees	47	28%
	To be a flexible employer	10	6%
Institutional	For legal reasons	18	11%
	Because it was the right thing to do	5	3%
	Union negotiated	4	2%
Other	For business or productivity reasons	37	22%
	Other	12	7%
	No answer given	31	19%

Percentages do not add up to 100 because some companies gave multiple reasons. Thirty-one companies provided no answer. Of those companies that provided an answer, the majority of them believed that it was to meet the needs of their work force. The next most popular reason was either to recruit and retain good employees or to be the "employer of choice." Both fall into the human capital category. Almost a fourth of the sample also felt that these programs would have an impact on their company's productivity and bottom line. Few survey respondents gave reasons that fell into the institutional category.

DISCUSSION

Summary

The purpose of this study was to examine the explanatory power of two theories: human capital theory and institutional theory in regards to the adoption of life balance innovations. Human capital is the economic value of a company's human resources (Becker, 1975) and human capital theory investigates the choices organizations make to increase the value of their human capital (Jackson & Schuler, forthcoming). The human capital theory hypotheses in this study predicted that organizations with highly trained and educated work forces, as well as those who bear high costs because of work-family conflict, will adopt life balance innovations as a means of improving retention, boosting recruitment, and protecting their human capital.

Institutional theory argues that organizations are social entities that seek approval for their existence and performance in socially constructed environments and that organizations conform with their environments to gain legitimacy and acceptance (Meyer & Rowan, 1977). Institutional theory hypotheses in this study predicted that even in the absence of 'high-need' circumstances and characteristics identified from within the human capital perspective, some organizations will still adopt life balance innovations for coercive, normative, or mimetic reasons.

To test these hypotheses, survey data and archival company information were entered into a regression with the number of innovations adopted as the dependent variable. The independent variables explained over a third of the possible variance in innovation adoption ($R^2 = .32$). This adoption was explained by the control variable company size, as well as by two human capital variables: training expenditures and labor intensity. Unionization was a significant predictor of adoption in the human capital first model, but not in the direction predicted by the hypothesis. When alternative dependent variables (See Appendix E) were used — some support for other human capital variables including education and average employee age was found. In no model, were any of the institutional hypotheses supported. Qualitative results also supported human capital reasons for adoption.

Chapter Overview

The remainder of this chapter will include a discussion of the implications of the findings for theory development including some post hoc analyses on possible work/family opinion leaders and then by the implications of the findings for human resource practitioners. This study will then be evaluated on its validity by considering some design problems and some limitations to the study's generalizability. With these implications and limitations in mind, several issues to be investigated in future research are discussed.

Implications for Theory Development

The studies which have heretofore looked at life balance innovation adoption, while adequately describing characteristics of who has adopted these programs (cf. Families and Work Institute 1991; Morgan & Milliken, 1992), have offered little insight into possible theoretical bases for these adoption decisions (Thierry & Meijman, 1994). The results of this study will provide some explanation as to which firms have adopted these life balance programs using human capital theory and institutional theory. Stinchcombe (1965) maintained that the most powerful way to test a theory was not to test it against chance, but rather to test it against and compare it to another major rival competing theory. Having completed this testing, in the following section, I hope to demonstrate my contribution to theory development.

Two theories were tested as possible predictors of the adoption of life balance innovations. The regression results found support for the human capital theory since this regression block was significant across models. This study did not find regression support for the institutional theory explanation of adoption. Two variables in the human capital block were significant across models — training expenditures and labor intensity. The significance of these variables means that companies that invest heavily in training their employees are more likely to further invest in them through life balance innovations and that companies for whom human capital represents a large portion of their total capital will also adopt life balance innovations as a means of protecting that

capital. At a more global level, the significance of the human capital block of variables suggests that companies' decisions to adopt these life balance innovations were made in order to protect and enhance the value of their human capital.

The support for the human capital model of adoption was further upheld by the results of the qualitative question. Triangulation is the combination of methods to study the same questions. It is "largely a vehicle for cross-validation when two or more distinct methods are found to be congruent and yield comparable data" (Jick, 1979, p. 365). The effectiveness of triangulation rests on the supposition that any weaknesses of a method will be balanced and corrected by the strength of another, different method (Jick, 1979). For this study, the results from the regression are supported by those of the qualitative question, but because of the level of the survey, the question asked by the two methods differed somewhat. The qualitative question asked directly "why did you adopt these programs", while the quantitative data made assumptions about why after an indirect examination that looked at patterns of what companies adopted life balance programs.

From the qualitative results, one can make inferences about the motivations behind the adoption decisions. The most frequently named responses on the qualitative question — to meet employees' work/family needs and to recruit and retain good employees — further support the notion that companies are adopting these programs to enhance their human capital. Even

the third most frequent response — productivity — has human capital implications since much of the premise of human capital theory concerns itself with the economic value of a company's work force. Human capital theorists posit that training leads to productivity (Becker, 1975) and have noted the positive association between education and earnings (Schultz, 1961). If employers believe work/family programs increase productivity or believe the programs protect the employees per Flamholtz and Lacey (1981) then they will likely adopt these programs to increase the value of their human capital. This ability to use life balance innovations as a means of protection was documented in Grover and Crooker (1995) who found that employees who had access to 'family-responsive policies' were more committed to their employer and had a lower intent to leave than whose without such access.

The regression models found no support for the institutional model. Unionization was a significant predictor when entered after the human capital variables but it was in fact negatively related to adoption — with more heavily unionized companies less likely to adopt these programs. It does not appear that unions are using coercive pressures to receive these benefits. The high correlation between unions and percentage male and unions and average age suggests that perhaps the work force demographics of heavily unionized companies and industries reflects a low need for these programs. Another possible explanation is that companies that currently are not unionized or are not heavily unionized are likely to adopt these programs as a means of union

avoidance. These companies may believe that the more voluntary human resource innovations that management provides, the less appealing a union will appear. Morgan and Milliken (1992) also found a negative relationship between unionization and adoption.

Some of the study's non-regression findings do, however, show some possible examples of coercive, normative, and mimetic institutional influences. First, there is some support for coercive pressures from the Family and Medical Leave Act of 1993. Ninety-eight percent of this study's sample reported that they had programs to comply with this act. Thirty-six of these companies reported that they did not adopt these programs until 1993 or later — the years the law has been in effect (the number of coerced adoptions may in fact be higher since only 101 of the companies listed a year of adoption for unpaid leaves.) Furthermore, fourteen companies listed 'legal reasons' as their reason for adopting these programs in the qualitative section. Also derived from the qualitative section is evidence that seven respondents may be adopting these programs for normative reasons. By answering that they adopted the programs because it "was the right thing to do," they seem to be supporting a moral and normative reason which reflects Meyer and Rowan (1977) and Selznick's (1957) concept of constructed reality about what is right.

Finally, the compression of adoption years shown in Appendix B gives some suggestion that there were some mimetic adoptions occurring. Adoptions of many of the programs are compressed into the five year period — 1990-1995.

While some of this compression may be a function of the innovation not existing or not being legal before then, as in the case of dependent care spending accounts, some of this compression is likely due to mimetic influences. It is only in the last decade that companies have been emphasizing that they are family-friendly employers not because demographic changes have forced this (since the entry of women into the workplace has stabilized) but because this has become trendy. This trendiness may follow Selznick's (1957) definition of institutionalization which is when something (in this case possibly life balance innovations) becomes infused with value beyond the technical requirements of the purpose at hand.

The effects of innovation compression do not seem to be limited to work/family innovations since Osterman (1994) found similar clusters of adoption years with work innovations such as Total Quality Management, team-based work, and quality circles. Other innovation researchers as well have described s-shaped curves of adoption which indicate early, middle and late adopters (cf. Damanpour & Evan, 1984; Rogers, 1982). The curve is s-shaped because adoption patterns are often such that there are few early adopters, many middle adopters, and a few late adopters.

This evidence of compression/mimetic adoptions without support in the regression results for institutional theory led me to believe that post hoc analyses on some institutional pressures were appropriate, specifically ones which would help me identify for whom and when these mimetic influences

may have played out. Two analyses were conducted — the first is a regression which omits the "life balance opinion leaders" and the second is an examination of correlation patterns between early and late adopters.

The first post hoc analysis was a regression which omitted six companies from the alternate regression model which included the open-ended question. These six companies were the high-end outliers identified by examining the residuals (each with a z-score above 2.0 and one with a z-score as high as 3.1), meaning that they had a dependent variable much higher than predicted. All six offer many programs, employ at least one work/family manager, and have produced a work/family brochure. Anecdotally, their heavy commitment to work/family concerns was further demonstrated in the course of this study since five out of six called the author to further discuss these issues. These six companies appear to be opinion leaders on work/family concerns — the most likely to have had programs in place for a considerable length of time and the most likely to have adopted some of the less frequently used programs. Because the companies were trend leaders, it was believed that institutional pressures would not impact them (although they might be the cause of institutional pressure on others). A regression was run, with these companies omitted. The regression table is presented in Appendix H.

In this model, for the first time the institutional block of variables was significant at the $p < .05$ level. The institutional variable industry adoption level was significant at the $p < .06$ level in the human capital first model and at the p

<.11 level for the institutional first model. In the institutional first model, the institutional by service interaction was significant at the $p < .11$ level. While these results are not strong ones (and in many cases are directional rather than statistically significant), they do show that for a subset of the sample, institutional pressures do seem to have some explanatory power. The R^2 for this regression was .44 and the following variables were significant in both the human capital and institutional first models: sales, training dollars, and labor intensity.

A second post hoc analysis: an examination of the timing of innovation adoption was also considered as a better explanation of the reasons for adoption. Do early adopters adopt for need reasons, such as to maintain a valuable work force with options elsewhere, while late adopters are more susceptible to institutional pressures — adopting not because the programs are especially appropriate for their work forces but because "everyone else is doing it." Scott and Meyer (1991) found that organization-specific features became less predictive of innovation adoption as time passed. For four of the most commonly adopted programs — flextime, unpaid dependent care leaves, parenting information, and child care referrals - companies were split into early and late adopters on these programs based on whether they had been adopted before or after the survey's mean adoption year. It was expected that for early adopters the human capital variables would correlate highly with the dependent variable and for the late adopters the institutional variables would

correlate highly with the dependent variable. The correlation patterns between the two were examined but no significant differences were detected nor noticeable patterns identified that supported the human capital first, institutional later post hoc prediction. The lack of results for this exploratory correlation analysis may be in part because of power concerns since correlation comparisons were often between small numbers of companies. The numbers were small because only a certain percentage of the sample had adopted the programs under investigation, and many of the companies did not indicate the adoption year.

In conclusion, the theoretical contribution of this study was the support it found for human capital theory as an explanation of the adoption of life balance innovations. This support means that companies appear to be adopting these programs in order to protect the human capital that they have invested in, especially when that human capital represents a sizable amount of their investment. This finding further supports the notion that human capital theory may be useful for human resource researchers beyond human capital's traditional domain of education only. Post hoc analyses suggest that for some companies the institutional pressures of their industry peers also predict their adoption choices.

Implications for Human Resource Practitioners

This study also has implications for the practice of human resource management. Three areas will be discussed in this section. First comments will

be made on the breadth and depth of innovation in this area. Second, how the significance of the human capital model and the non-significance of the institutional model may have effectiveness implications for the practice of these innovations is examined and third a discussion of how the growth of life balance innovations may be the results of demographic and generational changes in the American work force is offered.

Range of adoption. The first finding likely of interest to human resource practitioners is the range of adoption levels and the variety of extra programs that companies have developed. Life balance and work/family concerns appear to be areas where the Fortune 500 and Fortune Service 500 companies have invested resources — the average number of programs adopted was nine. This overall level and the level of individual adoptions is higher than that found in studies conducted just a few years ago. For example Morgan and Milliken (1992) using their family response scale found a mean of 7.6, which loosely equates to a mean number of programs of 7.6. In 1988, 50 percent of companies offered flextime (Christensen, 1989) and in 1991 55% of Fortune 500 employers offered referrals and 48% offered job sharing (Families and Work Institute, 1991). All of these percentages are somewhat lower than my own percentages of 78%, 61%, and 53% respectively (shown in Appendix B). This assumed growth is not surprising considering how many of the program years identified in Appendix B were in the period 1990-1995. The mean adoption here was nine but there was also considerable variance around this mean with a low score of

two programs and a high score of seventeen. Furthermore, companies also listed additional programs that they offered which brought the actual mean life balance innovations to ten and the maximum score to 24.

The companies at the low end were likely to have adopted unpaid family leaves (mandated by law) and usually flextime and dependent care spending accounts — the latter two having little cost beyond some administrative expenses (Friedman, 1991; Kossek, DeMarr, Backman, & Kollar, 1993). The companies with the heaviest involvement in life balance innovations had between 15 and 24 programs which usually included programs in all three sub-categories — full time, less than full-time, and dependent care. These high end adopters were also the most likely to have adopted programs that require a sizable investment — on-site child care, paid maternity leave, and sick child care for instance. The additional programs that companies adopted named in Appendix C, such as financial adoption assistance and tuition programs for employees and their children, also represent a financial and human resource commitment.

The lengthy list of additional programs demonstrates that life balance is truly an area where companies and their human resource departments have been innovative. Programs have been developed which address a range of employee needs — paid prenatal care, time off for volunteer work, and financial assistance during employees' times of need. Many companies in this survey appear to have taken a pro-active role in their employees' lives and offer

benefits which can address employees' roles as workers, parents, care givers, and community members. The voluntary nature of these programs, however, also allows for employees not to use these programs and to keep their employer separate from their non-work responsibilities if they choose. It is important to note, however, that heavy adopters of life balance innovations may have been more likely to respond to this survey (i.e. companies interested in life balance innovations will respond to a life balance innovation survey and would want the possible positive public relations press associated with responding and indicating a high commitment).

Results' implications for life balance practice. The support this study found for human capital theory should be of interest to human resource practitioners for two reasons: because it matches their identified reason for adoption and because it bodes well for the goals of the programs themselves.

As mentioned in the Implications for Theory section, the regression results and the qualitative results supported one another. Both sets of data primarily supported the human capital reasons for adopting these life balance innovation programs. This triangulated support means that the reasons that companies gave for adopting these programs seem to coincide with other (and more indirect) measures of why they are offering them. Considering the faddishness of many human resource innovations and the publicity of many fad failures such as quality circles, the triangulation of results here may support the longevity and value of these programs. If the qualitative and quantitative

results had given conflicting answers one might expect life balance innovations to be susceptible to faddishness as well.

In addition, the fact that support for human capital theory was found may also contribute to the success of these innovations since the philosophy of human capital theory closely mirrors the philosophy of life balance innovation. Both look to the value of the work force and consider ways of maintaining that economic value.

Demographic influences on life balance. One interesting part of this study, especially to human resource practitioners, was that work force composition was unrelated to adoption. This contradicts some previous studies (c.f. Auerbach, 1988; Goodstein, 1994; Milliken et al., 1990) where gender was a strong predictor of adoption. Gender was also found to be non-significant by Morgan and Milliken (1992). The lack of significance here suggests that perhaps life balance concerns are becoming more accepted by the whole company and are no longer just a concern of those on the "mommy track". This change may be the result of dual demographic influences — the aging of the baby boomers and the influx of generation X into the work force.

Aging baby boomers (those born between 1945 and 1964) are now at a point in the life cycle when people traditionally have downplayed the importance of work in their lives and focused more on their families (Erikson, 1980). In the 1980s, when the boomers were ten years younger, less likely to have families, and closer to the start of their careers, there was a large emphasis

in the popular press on "workaholics", "corporate climbing" and "yuppies" (cf. Deutschman, 1990; Kinkead, 1980) Now that the boomers are in their child-rearing years — as of 1991, 60 percent of boomer households had children (Russell, 1991) — and in a period of career slowdown, the press has again noticed the trend and emphasized how there is a new national culture of life balance (cf. Garland, 1991; Russell, 1991).

Another demographic influence on the culture of life balance has been the entry of generation X into the work force. The popular press has posited that this new generation is less work-minded than boomers and other generations were at the same age. There has been some speculation (but no research) as to the cause of a "slacker" mentality of many twentysomethings at an age when people are traditionally more career minded. Among the hypotheses are that these former latchkey kids and children of divorce refuse to be negligent parents (Brody, 1991; Zinn, 1992), and that this generation has observed the materialism of the 1980s and has decided that the costs of stress outweigh the material benefits (Ratan, 1993). Whether because of boomers' increased family responsibilities or true changes in generation values, age and gender composition were not the strong predictors of adoption that they have been in prior studies.

Limitations

Like all research, this dissertation has some flaws and limitations which must be considered. The first is that the response rate for this study was a low

18 percent. As has been mentioned, except for an uneven industry distribution no differences were discernible between respondents and non-respondents, but a different 18% of the population of Fortune 500 and Fortune Service 500 employers may have provided very different results.

This response rate inequity led to some possible problems with the operationalization of the institutional/mimetic hypothesis. This hypothesis was tested by using as an independent variable the average adoption levels of other companies in the subject's industry that participated in the study. This measure may have been a valid measure of industry pressures to adopt life balance innovations for those companies in industries that were well represented in the study but the values used may have been much less meaningful in industries with poor response rates. Furthermore, even some industries with a reasonable response rate, such as motor vehicle with 27%, may not have had a very useful value for this variable since only six companies responded — despite the percentage being high the number of companies was still low. Nevertheless, as shown in the post hoc analyses, this independent variable had predictive powers when the life balance opinion leaders were removed. This weak operationalization does however, makes me loathe to say that institutional theory is wholly useless in regards to explaining life balance innovation adoption since the test of its influence here was not as strong as the measures used to test human capital theory's influence. This imbalance between human capital and institutional theory violates the recommendations by Cooper and

Richardson (1986) that in pitting two theories against one another, efforts should be made to ensure that the tests are fair and not biased in favor of one theory from the beginning.

A third flaw in the study which has been discussed previously is missing data. While efforts were made to replace the missing data and to examine the impact of the missing data, the higher R^2s of the regression runs without missing data suggest that my findings might have been stronger if the data were whole. A study with multiple respondents per company may have been able to alleviate some of the missing data problem if surveys were sent specifically to the person who would have known the answer to questions about training expenditures and work force education breakdown. When regressions were run with the surveys without missing data, support for the three way interactions, capital intensity x average age x percent male and education x average age x percent male was found.

The next issue to be discussed is not a design flaw so much as a limit to the study's generalizability. This issue was my choice of the Fortune 500 and Fortune Service 500 employers. By choosing the largest employers, because I believed they would be the most susceptible to institutional pressures, I chose to ignore the millions of smaller U.S. employers. These smaller employers also have had to make life balance innovation decisions although their approaches may be smaller and more ad hoc such that they may not even need formal programs and policy statements. The Fortune 500 and the Fortune Service 500

are likely to have more programs overall (the mean for this study was ten) because they have more money, more employees, and because their size necessitates that these programs be fairly formalized. Furthermore, even in this limited sample of Fortune 500 and Fortune Service 500 companies, size was still the most powerful predictor of adoption level. Smaller employers may have fewer programs (and hence would have scored lower on the dependent variable) but they may be more easily able to interpret the specific needs of their employees and be more flexible in their administration of these programs.

Furthermore, the choice of the Fortune 500 and the Fortune Service 500 may have led to some faulty data points. Many of these corporations are global ones, with not only operations in the United States but also abroad. Some of the items asked on the survey — unionization and education level in particular may be difficult to answer for a multinational firm since both union structures and educational systems vary dramatically from country to country. Furthermore, training expenditures may likely be an area that is decentralized with each country's operation managing and maintaining their own training budget. The global nature of many of the respondent firms may have caused some of the missing data points since the questions become more difficult to answer the more operations overseas one has and it may also have caused some of the data that was provided to be inaccurate or accurate only for domestic operations.

The flaws and limitations described in this section illuminate the need for further research in life balance innovations, specifically, and more generally in

the use of human capital and institutional theory as complementary theories in human resource innovation research.

Future Research

Although the R^2 for this study was moderate ($R^2 = .32$) nearly two-thirds of the variance in life balance innovation adoption remains unexplained. This section will propose areas of research that may further explain the adoption of life balance innovations, as well as suggest other avenues of research indicated by my findings. Five possible areas of research will be discussed: 1. how an understanding of the labor market may further enhance human capital theory's explanatory capabilities; 2. how a further examination of opinion leaders may expand our understanding of innovation adoption; 3. why an exploration of who may be susceptible to institutional pressures would be of interest and how this may bear out for smaller firms; 4. the need for better research on some innovations' effectiveness and 5. more broadly, why human resource researchers should continue to apply organizational theories to human resource research as this dissertation did.

Because the strongest support was found for human capital theory, it is logical that in trying to explain the remaining variance another human capital concern, the labor market, be considered. A third of the companies in my survey said that they had adopted these innovations for recruitment and retention purposes and other studies (cf. Morgan & Milliken, 1992) have said that these programs are most prevalent in industries with labor shortages, most

notably nursing. A study with data on the labor markets that the individual subject companies face may be able to investigate whether these programs were adopted during particularly tight periods in the labor market. In addition, a study that also looked at employee use of these programs may be able to further explain if employee use of these programs is discouraged when the labor market is a "buyer's market." This concern about the labor market's influence is relevant not just in regards to life balance innovations, but to the adoption of many voluntary human resource innovations which are used to entice potential employees, to become the "employer of choice," and to retain employees who represent a human capital investment (Flamholtz & Lacey, 1981).

The post hoc findings about life balance opinion leaders suggests two future research areas: one which warns about the need to study these groups separately, and a second which investigates the differences between leaders and followers. First, the degree to which in my own study separating out opinion leaders altered regression results (and gave support to a second theory), leads me to suggest that other researchers also consider removing high-end adoption outliers to ensure that their own adoption effects are not being hidden. Opinion leaders are likely to exist for the adoption of all innovation sets but may be more or less potent in different industries or for administrative versus technical innovations. Research might also be conducted which includes only opinion leaders or only followers since to some extent they appear to be influenced by different predictors. It may be wise to study them separately once the research

has sufficiently identified to what group a company belongs in regards to an innovation or innovation set.

Furthermore, the finding that institutional pressures were only apparent when opinion leaders were removed suggests research that examines these leaders. What are the differences between these leaders and other companies (the followers). Is it possible to predict who is likely to be a leader in a new area like work/family concerns versus a follower. Are the same companies that are heavy investors in life balance always heavy investors in new management resource movements such as Total Quality Management, being a learning organization, team-based work and other major work force restructurings. If this tendency to always be the leader is supported, then if researchers closely track the human resource decisions of these opinion leaders, they may receive a preview of the human resource decisions of other companies to come.

A third area of research would be the further consideration (especially one with a more solid measure) of the institutional pressures that companies respond to. Goodstein (1994), who found support for institutional theory as a predictor of the adoption of child care innovations, limited his population to employers in Washington state. His findings which contradicts mine, force one to question does geography make institutional pressures more salient because one is competing more directly with local companies for customers, suppliers, and employees. In addition, because my study was limited to Fortune 500 and Fortune Service 500 companies, it is unknown how well these results might be

supported with other and smaller employers. Future research should consider how other employers address these issues, especially since even in this sample of the largest employers, size was still an important predictor of adoption. In choosing new samples to test the influence of institutional pressures, researchers would be wise to include in their design a way of questioning subjects on whom their institutional sets are. Porac, Thomas, and Baden-Fuller (1989) describe a community of Scottish knitters who when questioned about their competitive group named only other Scottish knitters - ignoring other non-Scottish sweater providers. By directly asking who is likely to influence their decisions, researchers may better be able to measure if isomorphism is in fact occurring.

Although not a direct result of my findings, my life balance innovation literature review did reveal some large gaps in innovation assessment. Some life balance innovations such as sick child care and employing a work-family manager are nearly unresearched and others such as telecommuting and phased retirement will likely increase in importance due to changes in laws and work force demographics and will need further study. These effectiveness studies should be partnered with an understanding of what other life balance innovations do the companies offer and the proposed goals of the innovation. For instance, were the innovations adopted to protect human capital investments as measured by such metrics as reduced turnover and absenteeism and an increase in satisfaction or were the programs designed to attain institutional goals — legal compliance, union cooperation, or prestige among

industry peers. My qualitative results, especially, showed the range of reasons for adoption — reasons which must be considered before appropriate yardsticks of effectiveness can be created.

Finally, I recommend that other researchers continue to apply organizational theories to human resource innovation research. For this dissertation, human capital theory and institutional theory were a framework for my ideas and hypotheses and they led to more systematic thinking. Human capital theory especially, seems particularly intuitive to human resource and organizational behavior researchers, who are inclined to think in terms of the value of a company's work force more so than the value of its other capital (Jackson & Schuler, forthcoming). I believe, despite my poor results for institutional theory, that the combination of human capital theory and institutional theory is a strong one which captures two very different reasons for making human resource decisions. This combination may be especially strong in an era of benchmarking, where companies look to opinion leaders to see how they are addressing these human resource and management concerns. Other theoretical combinations, certainly also exist — Blum, Fields, and Goodman (1994) used institutional theory and resource dependency in describing women in management and Snell and Dean (1992) used human capital theory and systems theory to predict advanced manufacturing technique usage. Whichever theories researchers choose, they are likely to expand human resource research beyond simple descriptive variables that are not tied together with an

underlying logic. It is this failure to ground research which causes much human resource research to be derided as atheoretical (Thierry & Meijman, 1994) and ignorant of the context in which human resource practices operate (Jackson & Schuler, forthcoming; Johns, 1993).

Conclusions

In conclusion, this study found both quantitative and qualitative support for the use of human capital theory in explaining companies' decisions to adopt or not adopt life balance innovations. No strong support for institutional theory was found in this study. Future research should continue to both explain and explore companies' choices about life balance especially as these programs age and as they become less trendy and perhaps more institutionalized. But more importantly, human resource researchers should continue to find ways to incorporate organizational theories (including, but not limited to human capital theory and institutional theory) into their research in ways that seek to explain the adoption, use, and evaluation of human resource programs.

APPENDICES

APPENDIX A

Name
Title
Company
Address
City, ST Zip Code

January 10, 1995

Dear Ms. Name:

I am an organizational behavior Ph.D. student at Michigan State University. For my dissertation, I am studying "work/family" issues and how "life balance" innovations such as flextime and dependent care benefits can be used to ameliorate them. I am surveying companies to learn what work/family programs they offer to their employees.

As a human resource professional, you are very important to the success of my study because you are best qualified to describe the innovations being provided by Company Name. If your company produces a work/family policy brochure (one that describes the benefits that you provide), I would greatly appreciate you sending me a copy of it. If it is easier for you, enclosed is a survey that I hope you will fill out. Please complete this survey to the best of your ability, giving estimates where necessary. Your responses will be kept confidential and will be reported only as part of an industry aggregate.

I know that you are busy and that you get many requests to complete questionnaires, but I hope that you can find the time to either send me a work/family brochure or complete my survey. The survey will take no more than 15 minutes of your time. **If you feel that someone else at your firm is better able to respond to this survey, please forward it to him or her.**

Thank you very much for your help. I look forward to receiving your response.

Yours truly,

Deborah Winters
Ph.D. Candidate

enclosures

«MrMs» «FirstName» «LastName»
«JobTitle»
«Company»
«Address1»
«City», «ST» «Zip»

January 25, 1995

Dear «MrMs» «LastName»:

I am an organizational behavior Ph.D. student at Michigan State University. For my dissertation, I am studying "work/family" issues and how "life balance" innovations can be used to ameliorate them. Two weeks ago, I sent you a copy of my dissertation survey but I have not yet received a response from you and your company. I hope you will reconsider your participation and fill out the enclosed survey. In appreciation for your help, you will be sent an analysis of your industry's use of "life balance" innovations.

As a human resources executive, you are very important to the success of my study because you are best qualified to describe the innovations being provided by «Company». Enclosed is a survey of several innovations, such as flextime, part-time options, and dependent care benefits. If you choose to participate, please complete the survey to the best of your ability, giving estimates where necessary. Your responses will be kept confidential and will be reported only as part of an industry aggregate.

I know that you are busy and that you get many requests to complete questionnaires, but I hope that you can find the time to complete my survey. It will take no more than **15 minutes** of your time. **If you feel that someone else at your firm is better able to respond to this survey, please forward it to him or her.** If you have already completed this survey, please disregard this letter.

If you have any questions, please call me at (517) 347-4622. Thank you very much for your help. I look forward to receiving your response.

Yours truly,

Deborah Winters
Ph.D. Candidate

enclosures

Life Balance Innovation Survey

Thank you for deciding to complete this survey on life balance innovations. The next two pages contain questions about your company's

- **Life balance innovations (e.g. flextime, job sharing)**
- **Workforce demographics**
- **Other human resource practices**

If you are unfamiliar with any of the programs named in this survey, refer to the back page of this survey for program descriptions. If your company produces a work/family benefits brochure, please enclose a copy of it with this survey. All responses will be kept confidential. An industry adoption report will be sent to you shortly.

Please use the enclosed envelope to mail to:

Deborah Winters
Department of Management
Michigan State University
N475 North Business Complex
East Lansing, MI 48824-9902

Life Balance Innovations

DIRECTIONS: The following are a list of 18 possible life balance innovations. Please indicate **which** innovations your company currently provides to its employees in the **United States**, and the **year** that the innovation was introduced. If only certain segments of your domestic workforce are eligible, please indicate **who is eligible** -- Managerial/professional employees or others. In addition, please estimate **how many** of your employees are eligible using the scale:

1 = very few 2 = some 3 = about half 4 = most 5 = all N/A = not applicable

INNOVATION	OFFERED	YEAR BEGUN (IF APPLICABLE)	WHO IS ELIGIBLE? (CIRCLE ELIGIBLE GROUPS)	% WORKFORCE ELIGIBLE (1 = very few 2 = some 3 = about half 4 = most 5 = all N/A = not applicable)
Flextime	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Compressed Work Week	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Telecommuting	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Part-time	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Job Sharing	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
V-Time	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Phased Retirement	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Leaves -- Dependent Care -- Paid	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Leaves -- Dependent Care -- Unpaid	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Leaves -- Education/ Sabbaticals	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Leaves -- Other	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Dependent Care Referrals	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Provide Parenting Information	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Child Care Discounts	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
On-Site Dependent Care	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Sick Child Care	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Dependent Care Spending Accounts	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A
Work-Family Manager	Yes No	19____	Mgr/Prof Other	1 2 3 4 5 N/A

Why did your company choose to adopt these innovations?

Are there any other **life balance innovations** that you offer? If yes, please describe:

Company Demographics

COMPANY CHARACTERISTICS	WORKFORCE DEMOGRAPHICS
1993 revenues _____	Approximately what percentage of your domestic workforce is **female?** _____ %
1994 revenues _____	Approximately what is the **average age** of your domestic workforce? _____
Number of total employees in 1994 _____	**% of workforce unionized** _____ %
Number of domestic employees in 1994 _____	

EDUCATION		TRAINING
Please approximate the break-down by **highest education level** of your domestic workforce (Total should equal 100%).		Approximately how much did your company spend on **domestic training** last year (1994)?
Less than high school	_____ %	Total $ amount $ _____
		OR
High school graduate/ GED equivalent	_____ %	Percentage of revenues _____ %
Some college	_____ %	What percentage of your domestic training is technical training (rather than soft skills or management training?) _____ %
Four year college degree	_____ %	
Graduate degree	_____ %	
Total	100 %	

WORK FAMILY MANAGER	SURVEY RESPONDENT
Name and phone number of company's work/family manager (if applicable/available).	Your title/position _____
Name _____	Years at this position _____
Number _____	Years at company _____
	Sex ☐ Male ☐ Female

THANK YOU AGAIN FOR PARTICIPATING.

Program Descriptions

Flextime -- Scheduling option that allows employees to choose starting and stopping times within the boundary of "core hours" when all employees must be present.
Compressed Work Week -- Scheduling option where standard work week is compressed into fewer than five days (most typically four 10 hour days).
Telecommuting -- Option that allows employees to work from their homes, especially when those employees are connected to the office electronically.
Part-time -- Scheduling option that provides for permanent employees who work fewer hours than the standard work week.
Job Sharing -- A variation of part- time work, where two employees share the hours and responsibilities of one full-time job.
V-Time -- V-time programs are voluntary reduced work time programs. Under v-time, full time employees can reduce their hours (and their pay) in order to shorten the work week or to add additional vacation days.
Phased Retirement -- Scheduling option for older employees to reduce the number of hours worked for a period of time before retirement.
Leaves -- Dependent Care -- Paid -- Periods of time off with compensation for infant care, adoption, or for elder care responsibilities.
Leaves -- Dependent Care -- Unpaid -- Periods of time off without compensation for infant care, adoption, or for elder care responsibilities.
Leaves -- Education/ Sabbaticals -- Periods of time off so that employees can attend school or engage in research.
Leaves -- Other -- Periods of time off for reasons in addition to dependent care or education.
Dependent Care Referrals -- Referrals are listings and recommendations of reputable dependent care providers in the area.
Provide Parenting Information -- Company sponsored seminars on parenting and child care issues.
Child Care Discounts -- Company negotiates a discounted fee for its employees with a local child care provider.
On-Site Dependent Care -- Company-sponsored day care center either on or near the work place.
Sick Child Care -- Company-sponsored sick child care centers that care for children when they are too sick to attend their regular day care center.
Dependent Care Spending Accounts -- Benefit that allows employees to use pre-tax dollars to purchase dependent care services.
Work-Family Manager -- Job title of employee who coordinates and publicizes work-family benefits.

APPENDIX B
Innovation Adoption Rates and Patterns

Innovation Adoption and the Dependent Variable. The survey sent to the companies asked what innovations the companies had adopted (the dependent variable). The innovations varied in their extent of adoption with some policies such as leaves and part time work nearly universal, while others were infrequently offered. Table 8 shows the percentage of employers in this survey who have adopted each program, the average year of its adoption, and a Likert Style scale 1 to 5 of how many of the companies' employees are eligible (1 = very few, 2 = some, 3 = about half, 4 = most, 5 = all).

Table 8
Extent of Adoption

Program	Percent Offer	s.d. Percent Offer	Mean year adopted	Mean years old	s.d. years old	How many employees are eligible	s.d. of how many eligible
Leaves Unpaid	96%	19%	1985	10	11	4.54	1.01
Part-Time	89%	32%	1979	16	15	2.68	1.49
Leaves Other	87%	34%	1976	19	13	4.18	1.34
DCSA	81%	39%	1990	5	3	4.54	.93
Flextime	78%	42%	1987	7	6	3.16	1.48
Dependent Care Referrals	61%	49%	1989	6	5	4.21	1.31
Compressed Work Week	58%	49%	1990	5	6	2.65	1.46
Leaves Education	54%	50%	1978	17	13	3.36	1.73
Job Sharing	53%	50%	1989	6	6	2.62	1.63
Provide Parenting Information	53%	50%	1989	6	5	4.34	1.15
Telecommuting	46%	50%	1991	4	3	2.42	1.61
Leaves - Dependent Care Paid	28%	45%	1985	10	12	4.37	1.09
Child Care Discounts	25%	44%	1990	5	4	3.98	1.41
Work Family Manager	25%	43%	1991	4	4	4.14	1.48
Sick Child Care	20%	40%	1990	5	5	3.85	1.39
V-Time	17%	37%	1990	5	3	3.54	1.75
Phased Retirement	17%	38%	1985	10	6	2.15	1.56
On Site Dependent Care	11%	32%	1991	4	5	2.65	1.58

The adoption rates ranged from 11% for on-site child care to 96% for unpaid leaves (mandated by the Family and Medical Leave Act). Despite a fairly high adoption rate for many of these programs, most have rather short histories — originating in the late 1980s and early 1990s. Although some of their adoption rates are lower, the dependent care benefits (which include dependent care spending accounts, parenting information, referrals, among others) seem to be available to a greater percentage of the work force (see sixth column) than the scheduling options do.

A further examination of the pattern of adoption shown in Figure 3 suggested that the adoption of many of the programs was compressed such that there were relatively few adoptions of any programs except education leaves, other leaves, and part time work prior to 1980. Dependent care programs were even more compressed with most adoption occurring 1990-1995. The Family and Medical Leave Act of 1993 appears to have strongly influenced the adoption of both paid and unpaid dependent care leaves as evidenced by a peak in their adoption in that year.

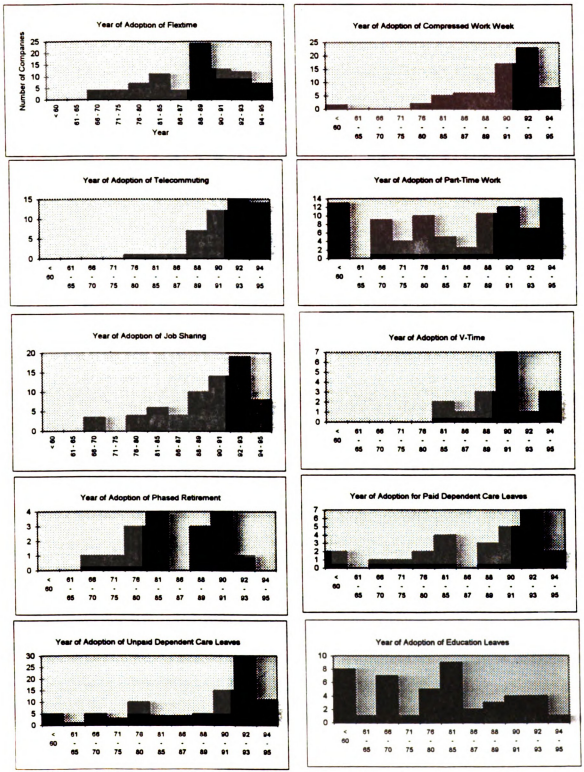
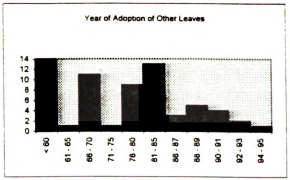
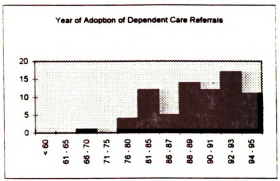
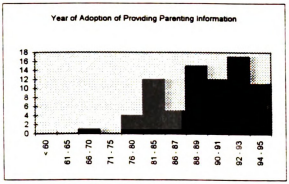
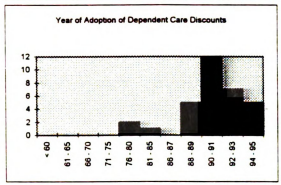


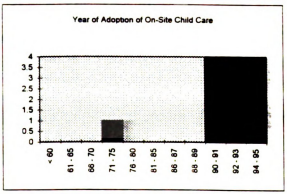
Figure 3
Years of Program Adoption

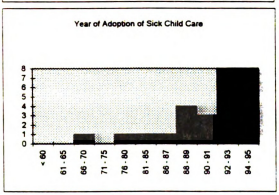

Year of Adoption of Other Leaves
14
12
10
8
6
4
2
0
< 60
61 - 65
66 - 70
71 - 75
76 - 80
81 - 85
86 - 87
88 - 89
90 - 91
92 - 93
94 - 95

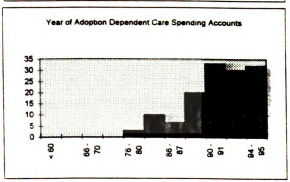

Year of Adoption of Dependent Care Referrals
20
15
10
5
0
< 60
61 - 65
66 - 70
71 - 75
76 - 80
81 - 85
86 - 87
88 - 89
90 - 91
92 - 93
94 - 95

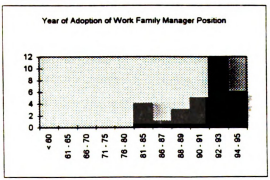

Year of Adoption of Providing Parenting Information
18
16
14
12
10
8
6
4
2
0
< 60
61 - 65
66 - 70
71 - 75
76 - 80
81 - 85
86 - 87
88 - 89
90 - 91
92 - 93
94 - 95


Year of Adoption of Dependent Care Discounts
12
10
8
6
4
2
0
< 60
61 - 65
66 - 70
71 - 75
76 - 80
81 - 85
86 - 87
88 - 89
90 - 91
92 - 93
94 - 95


Year of Adoption of On-Site Child Care
4
3.5
3
2.5
2
1.5
1
0.5
0
< 60
61 - 65
66 - 70
71 - 75
76 - 80
81 - 85
86 - 87
88 - 89
90 - 91
92 - 93
94 - 95


Year of Adoption of Sick Child Care
8
7
6
5
4
3
2
1
0
< 60
61 - 65
66 - 70
71 - 75
76 - 80
81 - 85
86 - 87
88 - 89
90 - 91
92 - 93
94 - 95


Year of Adoption Dependent Care Spending Accounts
35
30
25
20
15
10
5
0
< 60
66 - 70
76 - 80
86 - 87
90 - 91
94 - 95


Year of Adoption of Work Family Manager Position
12
10
8
6
4
2
0
< 60
61 - 65
66 - 70
71 - 75
76 - 80
81 - 85
86 - 87
88 - 89
90 - 91
92 - 93
94 - 95

APPENDIX C

Other Life Balance Programs Named in Open-Ended Question

Adoption assistance
Alcohol/drug rehabilitation assistance
Charitable giving program
Discounts at health clubs
Employee Assistance Programs
Expatriate/repatriate training for employees and families
Financial assistance to employees in need
Lactation rooms
Matching grants program with universities
Meal break flexibility
Paid disability leaves
Paid prenatal education
Paid time off for parent-teacher conferences
Paid volunteer time for schools
Participate in the American Collaboration for Quality Dependent Care
Partner with local schools
Prepared take home foods for sale to employees
Relocation assistance
Scholarships for children of employees
School holiday programs
Sponsor Weight Watcher meetings
Summer camp for employee children
Tuition program
Wellness programs

APPENDIX D
Open List Dependent Variable Regression Results

The R^2 for this regression run was .35 and the pattern of significance was again fairly similar to the main model. Sales, training, and labor intensity were significant in both runs. It differs from the main model in that unionization is significant here in only in Human Capital first model and the education x average age x percent male is not significant here.

Table 9
Open List Regression Results (Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.44**		1993 Sales $	.44**	
R^2		.20	**R^2**		.20
Adjusted R^2		.20	**Adjusted R^2**		.20
ΔR^2		.20**	**ΔR^2**		.20**
Human Capital Block			**Institutional Block**		
Service	.03		Percent Unionized	-.10	
Capital Intensity	-.16*		Fortune Reputation	.05	
Industry Dynamism	-.05		Industry Adoption	.05	
Education Level	.06				
Training Dollars	.30**				
Percent Male	-.07				
Average Age	-.12				
R^2		.31	**R^2**		.22
Adjusted R^2		.27	**Adjusted R^2**		.20
ΔR^2		.11**	**ΔR^2**		.02
Institutional Block			**Human Capital Block**		
Percent Unionized	-.19*		Service	.06	
Fortune Reputation	.01		Capital Intensity	-.17*	
Industry Adoption	.05		Industry Dynamism	-.07	
			Education Level	-.03	
			Training Dollars	.31**	
			Percent Male	.04	
			Average Age	-.09	
R^2		.33	**R^2**		.33
Adjusted R^2		.29	**Adjusted R^2**		.29
ΔR^2		.02	**ΔR^2**		.12**
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.22		Industry Adoption x Service	.37	
Education x Percent Male	.12		Industry Adoption x Dynamism	.08	
Education x Average Age	-.12				
CI x Percent Male	-.01				
CI x Average Age	.11				
R^2		.34			
Adjusted R^2		.27			
ΔR^2		.00			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	.45				
Education x Percent Male x Ave. Age	-.45				
R^2		.35	**R^2**		.34
Adjusted R^2		.27	**Adjusted R^2**		.28
ΔR^2		.01	**ΔR^2**		.00
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	.31		Percent Male x Average Age	-.23	
Industry Adoption x Dynamism	.10		Education x Percent Male	.12	
			Education x Average Age	-.09	
			CI x Percent Male	-.02	
			CI x Average Age	.05	
			R^2		.34
			Adjusted R^2		.26
			ΔR^2		.00
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	.43	
			Education x Percent Male x Ave. Age	-.43	
R^2		.35	**R^2**		.35
Adjusted R^2		.26	**Adjusted R^2**		.26
ΔR^2		.00	**ΔR^2**		.01

† $p < .10$ * $p < .05$ ** $p < .01$

APPENDIX E
Alternative Dependent Variables

Two other dependent variables were constructed and tested but were not chosen as the main dependent variable. The first alternative dependent variable weighted the point awarded for having a program by a Likert-type scale (1 = very few, 2 = some, 3 = about half, 4 = most, 5 = all) of how many employees were eligible to participate. The second alternative dependent variable split the summed dependent variable into program types — full-time, less than full-time, and dependent care benefits. The rationale for the construction of each alternative dependent variable, the method of its construction, and the regression results follow.

Weighted Dependent Variable

The weighted dependent variable was developed to see if differences in availability effected the explanatory power of the two theories. For example, some companies might have many programs "on the books" but may make them available to only a sub-section of their work force, such as only to support staff or to professionals, whereas another company may have comparatively few programs but may make them available to all employees.

A scoring system was developed that weighted innovation adoption by how many employees were eligible to participate in the program. If 100 percent of a firm's work force were eligible for a program, a score of five points was awarded. If any amount less than 100 were eligible then between one and four points were awarded, using the scale (1 = very few, 2 = some, 3 = about half, 4 =

most, 5 = all). The dependent variable was the sum of these weighted points. As with the summed variable, in addition to the 18 programs described previously, firms were awarded points for other life balance innovations that they had adopted as well. The potential range on this dependent variable was 0.0 to 90.0, with a higher score possible if a company had adopted all 18 innovations named for all of its employees, as well as other innovations not named on the survey. The actual range was 4.0 to 91.0. When a regression was run with this weighted dependent variable and the same blocks of independent variables, the results were similar to, but not identical to those used in the summed model. Regression results follow.

Table 10

Regression Results Weighted DV (Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.48**		1993 Sales $	.48**	
R^2		**.23**	**R^2**		**.23**
Adjusted R^2		**.23**	**Adjusted R^2**		**.23**
ΔR^2		**.23****	**ΔR^2**		**.23****
Human Capital Block			**Institutional Block**		
Service	-.09		Percent Unionized	-.05	
Capital Intensity	-.19**		Fortune Reputation	.11	
Industry Dynamism	-.13		Industry Adoption	.06	
Education Level	.14†				
Training Dollars	.32**				
Percent Male	-.06				
Average Age	-.14†				
R^2		**.37**	**R^2**		**.25**
Adjusted R^2		**.34**	**Adjusted R^2**		**.23**
ΔR^2		**.14****	**ΔR^2**		**.02**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.09		Service	-.08	
Fortune Reputation	.01		Capital Intensity	-.19**	
Industry Adoption	.05		Industry Dynamism	-.13	
			Education Level	.09	
			Training Dollars	.33**	
			Percent Male	.00	
			Average Age	-.13	
R^2		**.38**	**R^2**		**.38**
Adjusted R^2		**.33**	**Adjusted R^2**		**.33**
ΔR^2		**.01**	**ΔR^2**		**.13****
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.13		Industry Adoption x Service	-.18	
Education x Percent Male	.24		Industry Adoption x Dynamism	.03	
Education x Average Age	-.10				
CI x Percent Male	.00				
CI x Average Age	.66				
R^2		**.40**			
Adjusted R^2		**.33**			
ΔR^2		**.02**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	.24				
Education x Percent Male x Ave. Age	.11				
R^2		**.40**	**R^2**		**.38**
Adjusted R^2		**.32**	**Adjusted R^2**		**.32**
ΔR^2		**.00**	**ΔR^2**		**.00**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	-.27		Percent Male x Average Age	-.13	
Industry Adoption x Dynamism	.02		Education x Percent Male	.24	
			Education x Average Age	-.11	
			CI x Percent Male	.03	
			CI x Average Age	.70	
			R^2		**.41**
			Adjusted R^2		**.32**
			ΔR^2		**.02**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	.22	
			Education x Percent Male x Ave. Age	.14	
R^2		**.41**	**R^2**		**.41**
Adjusted R^2		**.31**	**Adjusted R^2**		**.31**
ΔR^2		**.00**	**ΔR^2**		**.00**

† $p < .10$ * $p < .05$ ** $p < .01$

This dependent variable was not used for the main model because missing data in the weightings reduced the N to 142. As Cohen and Cohen (1983) explained, there cannot be missing data in the dependent variable for a case to be included or for the regression to be meaningful. The R^2 for this regression was .41. Regardless of order of block entry, the sales and the human capital main effects blocks were significant. The independent variables which were significant were sales, training dollars, and labor intensity, which supports hypotheses 2a and 5. Two variables: average age and education were significant only when the human capital block was entered first — which gives weak support for hypothesis 4. These results differed from the summed dependent variable's in that the R^2 here was somewhat higher and some variables had different significance patterns: unionization was not significant here but education and average age in the human capital first model were. These differences are small and are all part of the human capital block so the findings' support for the human capital theory and the poor support for the institutional theory are unchanged.

Divided Dependent Variable

The second alternate dependent variable was in fact three dependent variables - one each for the full-time, less than full-time, and dependent care programs. The divided dependent variable was constructed to see if different program subsets were differently explained by the two theories — human capital theory and institutional theory.

These dependent variables were the summed number of programs offered in each subset. Because the weightings were not used, the N for this regression was 167 not the smaller 142. The full-time dependent variable could range from 0.0 to 3.0 and included flex-time, compressed work week, and telecommuting. The less than full-time dependent variable could range from 0.0 to 8.0 and included scores on part time work, job sharing, v-time, phased retirement, and the four types of leaves. The child care dependent variable could range from 0.0 to 7.0 and included referrals, parenting information, child care discounts, on-site care, sick child care, dependent care spending accounts, and having a work/family manager. Innovations that companies wrote-in and that were named in Appendix C were not included in the construction of these dependent variables.

Regression results are on the next pages. The R^2 for the full-time regression was .23 and the control variable sales was significant. Unionization ($p < .10$) and training dollars ($p < .10$) were significant when the institutional variables were entered first. The R^2 for the less than full-time regression was .21 and three variables — sales, training dollars, and labor intensity were significant predictors in both models. Dependent care had the highest R^2 at .27. Three variables were significant regardless of order of entry: sales, training dollars, and labor intensity. Again, unionization was significant only when the institutional variables were entered first and education was significant only when the human capital variables were entered first. Like the weighted dependent variable, these findings show the robustness of the sales, training

dollars, and labor intensity variables and the weak relationships with other variables. Table 14 provides a comparison of significance patterns across the multiple dependent variables.

Table 11

Regression Results Full-Time Innovations (Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.37**		1993 Sales $	.37**	
R^2		**.14**	**R^2**		**.14**
Adjusted R^2		**.13**	**Adjusted R^2**		**.13**
ΔR^2		**.14****	**ΔR^2**		**.14****
Human Capital Block			**Institutional Block**		
Service	.02		Percent Unionized	-.15†	
Capital Intensity	-.08		Fortune Reputation	-.01	
Industry Dynamism	-.03		Industry Adoption	.06	
Education Level	.08				
Training Dollars	.12				
Percent Male	-.11				
Average Age	-.09				
R^2		**.18**	**R^2**		**.17**
Adjusted R^2		**.14**	**Adjusted R^2**		**.15**
ΔR^2		**.05**	**ΔR^2**		**.03**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.14		Service	.04	
Fortune Reputation	-.04		Capital Intensity	-.08	
Industry Adoption	.05		Industry Dynamism	-.03	
			Education Level	.02	
			Training Dollars	.14†	
			Percent Male	-.03	
			Average Age	-.08	
R^2		**.20**	**R^2**		**.20**
Adjusted R^2		**.14**	**Adjusted R^2**		**.14**
ΔR^2		**.02**	**ΔR^2**		**.03**
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	.00		Industry Adoption x Service	-.05	
Education x Percent Male	.08		Industry Adoption x Dynamism	-.19	
Education x Average Age	-.03				
CI x Percent Male	.49				
CI x Average Age	.51				
R^2		**.22**			
Adjusted R^2		**.14**			
ΔR^2		**.02**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	-.08				
Education x Percent Male x Ave. Age	.56				
R^2		**.23**	**R^2**		**.20**
Adjusted R^2		**.14**	**Adjusted R^2**		**.13**
ΔR^2		**.01**	**ΔR^2**		**.00**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	-.19		Percent Male x Average Age	.01	
Industry Adoption x Dynamism	-.12		Education x Percent Male	.08	
			Education x Average Age	-.03	
			CI x Percent Male	.49	
			CI x Average Age	.53	
			R^2		**.22**
			Adjusted R^2		**.13**
			ΔR^2		**.02**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	-.08	
			Education x Percent Male x Ave. Age	.57	
R^2		**.23**	**R^2**		**.23**
Adjusted R^2		**.13**	**Adjusted R^2**		**.13**
ΔR^2		**.00**	**ΔR^2**		**.01**

† $p < .10$ * $p < .05$ ** $p < .01$

Table 12

Regression Results Less than Full-Time Innovations

(Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.31**		1993 Sales $	.31**	
R^2		**.10**	**R^2**		**.10**
Adjusted R^2		**.09**	**Adjusted R^2**		**.09**
ΔR^2		**.10****	**ΔR^2**		**.10****
Human Capital Block			**Institutional Block**		
Service	-.17		Percent Unionized	-.10	
Capital Intensity	-.17*		Fortune Reputation	.09	
Industry Dynamism	-.05		Industry Adoption	-.02	
Education Level	.06				
Training Dollars	.17*				
Percent Male	-.12				
Average Age	-.04				
R^2		**.18**	**R^2**		**.11**
Adjusted R^2		**.13**	**Adjusted R^2**		**.09**
ΔR^2		**.08***	**ΔR^2**		**.02**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.14		Service	-.16	
Fortune Reputation	.07		Capital Intensity	-.18*	
Industry Adoption	.02		Industry Dynamism	-.07	
			Education Level	.00	
			Training Dollars	.17*	
			Percent Male	-.06	
			Average Age	-.01	
R^2		**.19**	**R^2**		**.19**
Adjusted R^2		**.13**	**Adjusted R^2**		**.13**
ΔR^2		**.01**	**ΔR^2**		**.08***
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.07		Industry Adoption x Service	-.31	
Education x Percent Male	.08		Industry Adoption x Dynamism	.14	
Education x Average Age	.22				
CI x Percent Male	-.13				
CI x Average Age	.14				
R^2		**.20**			
Adjusted R^2		**.12**			
ΔR^2		**.01**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	.19				
Education x Percent Male x Ave. Age	.23				
R^2		**.20**	**R^2**		**.20**
Adjusted R^2		**.11**	**Adjusted R^2**		**.13**
ΔR^2		**.00**	**ΔR^2**		**.01**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	-.28		Percent Male x Average Age	-.07	
Industry Adoption x Dynamism	.11		Education x Percent Male	.08	
			Education x Average Age	.19	
			CI x Percent Male	-.10	
			CI x Average Age	.17	
			R^2		**.21**
			Adjusted R^2		**.11**
			ΔR^2		**.01**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	.14	
			Education x Percent Male x Ave. Age	.25	
R^2		**.21**	**R^2**		**.21**
Adjusted R^2		**.10**	**Adjusted R^2**		**.10**
ΔR^2		**.00**	**ΔR^2**		**.00**

† $p < .10$ * $p < .05$ ** $p < .01$

Table 13
Regression Results Dependent Care Innovations
(Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.39**		1993 Sales $	.39**	
R^2		**.15**	**R^2**		**.15**
Adjusted R^2		**.14**	**Adjusted R^2**		**.14**
ΔR^2		**.15****	**ΔR^2**		**.15****
Human Capital Block			**Institutional Block**		
Service	.03		Percent Unionized	-.15†	
Capital Intensity	-.17*		Fortune Reputation	.07	
Industry Dynamism	-.09		Industry Adoption	.01	
Education Level	.14*				
Training Dollars	.17*				
Percent Male	-.12				
Average Age	-.08				
R^2		**.24**	**R^2**		**.18**
Adjusted R^2		**.20**	**Adjusted R^2**		**.16**
ΔR^2		**.08***	**ΔR^2**		**.03**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.13		Service	.04	
Fortune Reputation	.05		Capital Intensity	-.17*	
Industry Adoption	-.03		Industry Dynamism	-.12	
			Education Level	.10	
			Training Dollars	.17*	
			Percent Male	-.07	
			Average Age	-.04	
R^2		**.25**	**R^2**		**.25**
Adjusted R^2		**.19**	**Adjusted R^2**		**.19**
ΔR^2		**.01**	**ΔR^2**		**.07†**
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.31		Industry Adoption x Service	-.29	
Education x Percent Male	.11		Industry Adoption x Dynamism	.28	
Education x Average Age	.20				
CI x Percent Male	-.03				
CI x Average Age	.17				
R^2		**.26**			
Adjusted R^2		**.18**			
ΔR^2		**.02**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	-.14				
Education x Percent Male x Ave. Age	.12				
R^2		**.26**	**R^2**		**.25**
Adjusted R^2		**.17**	**Adjusted R^2**		**.19**
ΔR^2		**.00**	**ΔR^2**		**.01**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	-.28		Percent Male x Average Age	-.31	
Industry Adoption x Dynamism	.29		Education x Percent Male	.11	
			Education x Average Age	.17	
			CI x Percent Male	.03	
			CI x Average Age	.19	
			R^2		**.27**
			Adjusted R^2		**.18**
			ΔR^2		**.02**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	-.21	
			Education x Percent Male x Ave. Age	.15	
R^2		**.27**	**R^2**		**.27**
Adjusted R^2		**.17**	**Adjusted R^2**		**.17**
ΔR^2		**.01**	**ΔR^2**		**.00**

† $p < .10$ * $p < .05$ ** $p < .01$

Table 14
Comparison of Significance Patterns across Models

Variable	Main Model	Weighted DV	Full Time DV	Part Time DV	Dependent Care DV
Sales	**	**	**	**	**
Service					
Capital Intensity	*	**		*	*
Industry Dynamism					
Education Level		†[1]			*[1]
Training Dollars	**	**	†[2]	*	*
Percent Male					
Average Age		†[1]			
Percent Unionized	*		†[2]		†[2]
Fortune Reputation					
Industry Adoption					
Percent Male x Average Age					
Education x Percent Male					
Education x Average Age					
CI x Percent Male					
CI x Average Age					
CI x Percent Male x Ave.Age					
Education x Percent Male x Ave. Age	*				
Industry Adoption x Service					
Industry Adoption x Dynamism					

† $p < .10$ * $p < .05$ ** $p < .01$

[1] Human Capital first model only
[2] Institutional first model only

APPENDIX F
Regression Results without Missing Data

The training dollar regression explained 47 percent of the variance and the following variables were significant predictors: sales dollars, training dollars, capital intensity, and the education x percentage male x average age three way interaction. The education regression explained 40 percent of the variance and sales dollars, service, training dollars, capital intensity, education x average age, and the capital intensity x percent male x average age three way interaction were significant. The reputation regression explained 40 percent of the variance but only sales, average age and training dollars were significant predictors of adoption. For this regression, the coefficient for labor intensity was much lower than in other models, so its non-significance here does not seem to be just a function of the reduced power of this regression.

The regression models follow. Table 18 provides a comparison of significance patterns across the non-missing data regression models.

Table 15

Regression Results Without Missing Data on Training Dollars

(Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.42**		1993 Sales $	.42**	
R^2		**.18**	**R^2**		**.18**
Adjusted R^2		**.17**	**Adjusted R^2**		**.17**
ΔR^2		**.18****	**ΔR^2**		**.18****
Human Capital Block			**Institutional Block**		
Service	.23		Percent Unionized	-.10	
Capital Intensity	-.22*		Fortune Reputation	.06	
Industry Dynamism	.06		Industry Adoption	.06	
Education Level	.08				
Training Dollars	.31**				
Percent Male	-.02				
Average Age	-.15				
R^2		**.29**	**R^2**		**.20**
Adjusted R^2		**.22**	**Adjusted R^2**		**.16**
ΔR^2		**.12**†	**ΔR^2**		**.02**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.21		Service	.22	
Fortune Reputation	.01		Capital Intensity	-.23*	
Industry Adoption	.17		Industry Dynamism	.06	
			Education Level	-.10	
			Training Dollars	.33**	
			Percent Male	.13	
			Average Age	-.15	
R^2		**.34**	**R^2**		**.34**
Adjusted R^2		**.25**	**Adjusted R^2**		**.25**
ΔR^2		**.04**	**ΔR^2**		**.14***
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.88		Industry Adoption x Service	.77	
Education x Percent Male	.42		Industry Adoption x Dynamism	.66	
Education x Average Age	-.46				
CI x Percent Male	-.21				
CI x Average Age	-.11				
R^2		**.37**			
Adjusted R^2		**.23**			
ΔR^2		**.03**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	-.56				
Education x Percent Male x Ave. Age	2.34**				
R^2		**.46**	**R^2**		**.35**
Adjusted R^2		**.33**	**Adjusted R^2**		**.24**
ΔR^2		**.09****	**ΔR^2**		**.01**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	.72		Percent Male x Average Age	-.96	
Industry Adoption x Dynamism	.42		Education x Percent Male	.45	
			Education x Average Age	-.42	
			CI x Percent Male	-.19	
			CI x Average Age	-.25	
			R^2		**.38**
			Adjusted R^2		**.23**
			ΔR^2		**.03**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	-.54	
			Education x Percent Male x Ave. Age	2.28**	
R^2		**.47**	**R^2**		**.47**
Adjusted R^2		**.32**	**Adjusted R^2**		**.32**
ΔR^2		**.01**	**ΔR^2**		**.09****

† $p < .10$ * $p < .05$ ** $p < .01$

Table 16

Regression Results Without Missing Data on Education.

(Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.40**		1993 Sales $	.40**	
R^2		**.16**	**R^2**		**.16**
Adjusted R^2		**.15**	**Adjusted R^2**		**.15**
ΔR^2		**.16****	**ΔR^2**		**.16****
Human Capital Block			**Institutional Block**		
Service	.27†		Percent Unionized	-.16	
Capital Intensity	-.22*		Fortune Reputation	.06	
Industry Dynamism	.13		Industry Adoption	.01	
Education Level	.12				
Training Dollars	.29**				
Percent Male	.02				
Average Age	-.17				
R^2		**.29**	**R^2**		**.19**
Adjusted R^2		**.23**	**Adjusted R^2**		**.16**
ΔR^2		**.13****	**ΔR^2**		**.03**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.25†		Service	.32†	
Fortune Reputation	.02		Capital Intensity	-.23*	
Industry Adoption	.08		Industry Dynamism	.11	
			Education Level	-.02	
			Training Dollars	.31**	
			Percent Male	.14	
			Average Age	-.11	
R^2		**.33**	**R^2**		**.33**
Adjusted R^2		**.25**	**Adjusted R^2**		**.25**
ΔR^2		**.04**	**ΔR^2**		**.14****
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.09		Industry Adoption x Service	.38	
Education x Percent Male	.40		Industry Adoption x Dynamism	.22	
Education x Average Age	1.24†				
CI x Percent Male	-2.20				
CI x Average Age	-.06				
R^2		**.37**			
Adjusted R^2		**.26**			
ΔR^2		**.04**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	-2.66†				
Education x Percent Male x Ave. Age	2.56				
R^2		**.40**	**R^2**		**.33**
Adjusted R^2		**.27**	**Adjusted R^2**		**.24**
ΔR^2		**.02**	**ΔR^2**		**.00**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	.51		Percent Male x Average Age	-.13	
Industry Adoption x Dynamism	.27		Education x Percent Male	.47	
			Education x Average Age	1.29†	
			CI x Percent Male	-2.42	
			CI x Average Age	-.08	
			R^2		**.38**
			Adjusted R^2		**.25**
			ΔR^2		**.05**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	-2.65†	
			Education x Percent Male x Ave. Age	1.50	
R^2		**.40**	**R^2**		**.40**
Adjusted R^2		**.26**	**Adjusted R^2**		**.26**
ΔR^2		**.01**	**ΔR^2**		**.02**

† $p < .10$ * $p < .05$ ** $p < .01$

Table 17
Regression Results Without Missing Data on Reputation
(Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.41**		1993 Sales $	.41**	
R^2		**.17**	**R^2**		**.17**
Adjusted R^2		**.15**	**Adjusted R^2**		**.15**
ΔR^2		**.17****	**ΔR^2**		**.17****
Human Capital Block			**Institutional Block**		
Service	-.16		Percent Unionized	-.16	
Capital Intensity	.04		Fortune Reputation	.13	
Industry Dynamism	.06		Industry Adoption	.02	
Education Level	.16				
Training Dollars	.24†				
Percent Male	.12				
Average Age	-.30*				
R^2		**.33**	**R^2**		**.21**
Adjusted R^2		**.23**	**Adjusted R^2**		**.15**
ΔR^2		**.17†**	**ΔR^2**		**.04**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.21		Service	-.13	
Fortune Reputation	.00		Capital Intensity	.03	
Industry Adoption	-.02		Industry Dynamism	-.02	
			Education Level	.08	
			Training Dollars	.26†	
			Percent Male	.21	
			Average Age	-.30†	
R^2		**.36**	**R^2**		**.36**
Adjusted R^2		**.21**	**Adjusted R^2**		**.21**
ΔR^2		**.02**	**ΔR^2**		**.15**
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.28		Industry Adoption x Service	.35	
Education x Percent Male	.11		Industry Adoption x Dynamism	.52	
Education x Average Age	.14				
CI x Percent Male	-.36				
CI x Average Age	.03				
R^2		**.37**			
Adjusted R^2		**.15**			
ΔR^2		**.02**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	.05				
Education x Percent Male x Ave. Age	.48				
R^2		**.38**	**R^2**		**.37**
Adjusted R^2		**.12**	**Adjusted R^2**		**.20**
ΔR^2		**.01**	**ΔR^2**		**.02**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	.20		Percent Male x Average Age	-.31	
Industry Adoption x Dynamism	.58		Education x Percent Male	.11	
			Education x Average Age	.16	
			CI x Percent Male	-.36	
			CI x Average Age	-.04	
			R^2		**.39**
			Adjusted R^2		**.13**
			ΔR^2		**.02**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	-.19	
			Education x Percent Male x Ave. Age	.52	
R^2		**.40**	**R^2**		**.40**
Adjusted R^2		**.10**	**Adjusted R^2**		**.10**
ΔR^2		**.02**	**ΔR^2**		**.01**

† $p < .10$ * $p < .05$ ** $p < .01$

Table 18
Comparison of Significance Patterns across Models

Variable	Main Model	Training	Education	Reputation
Sales	**	**	**	**
Service			†	
Capital Intensity	*	*	*	
Industry Dynamism				
Education Level				
Training Dollars	**	**	**	†
Percent Male				
Average Age				*
Percent Unionized	*		†[1]	
Fortune Reputation				
Industry Adoption				
Percent Male x Average Age				
Education x Percent Male				
Education x Average Age			†	
CI x Percent Male				
CI x Average Age				
CI x Percent Male x Average Age			†	
Education x Percent Male x Ave. Age	*	**		
Industry Adoption x Service				
Industry Adoption x Dynamism				

† $p < .10$ * $p < .05$ ** $p < .01$

[1] Human Capital first model only
[2] Institutional first model only

APPENDIX G
Regression Results with Reputation Removed

The R^2 for this regression model as with the main regression model was .32 and the same variables: sales, capital intensity, training dollars, unionization, and the education x percent male x average age were significant. The only differences between this and the main regression model are slight differences in the beta coefficients and the institutional block is now significant at either the ($p < .10$) level or the ($p < .05$) level.

Table 19
Regression Results with Reputation Removed
(Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.40**		1993 Sales $	.40**	
R^2		**.16**	**R^2**		**.16**
Adjusted R^2		**.16**	**Adjusted R^2**		**.16**
ΔR^2		**.16****	**ΔR^2**		**.16****
Human Capital Block			**Institutional Block**		
Service	.06		Percent Unionized	-.14†	
Capital Intensity	-.20**		Industry Adoption	.04	
Industry Dynamism	-.01				
Education Level	.09				
Training Dollars	.22**				
Percent Male	-.07				
Average Age	-.13				
R^2		**.25**	**R^2**		**.19**
Adjusted R^2		**.21**	**Adjusted R^2**		**.17**
ΔR^2		**.09****	**ΔR^2**		**.03†**
Institutional Block			**Human Capital Block**		
Percent Unionized	-.21*		Service	.09	
Industry Adoption	.06		Capital Intensity	-.20**	
			Industry Dynamism	-.03	
			Education Level	-.01	
			Training Dollars	.24**	
			Percent Male	.04	
			Average Age	-.10	
R^2		**.28**	**R^2**		**.28**
Adjusted R^2		**.23**	**Adjusted R^2**		**.23**
ΔR^2		**.03***	**ΔR^2**		**.09****
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.08		Industry Adoption x Service	.42	
Education x Percent Male	.13		Industry Adoption x Dynamism	.33	
Education x Average Age	-.03				
CI x Percent Male	.06				
CI x Average Age	.11				
R^2		**.28**			
Adjusted R^2		**.21**			
ΔR^2		.00			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	-.47				
Education x Percent Male x Ave. Age	.80*				
R^2		**.31**	**R^2**		**.29**
Adjusted R^2		**.23**	**Adjusted R^2**		**.23**
ΔR^2		**.03†**	**ΔR^2**		**.01**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	.35		Percent Male x Average Age	-.11	
Industry Adoption x Dynamism	.37		Education x Percent Male	.13	
			Education x Average Age	-.01	
			CI x Percent Male	.09	
			CI x Average Age	.04	
			R^2		**.29**
			Adjusted R^2		**.21**
			ΔR^2		.00
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	-.49	
			Education x Percent Male x Ave. Age	.78*	
R^2		**.32**	**R^2**		**.32**
Adjusted R^2		**.23**	**Adjusted R^2**		**.23**
ΔR^2		**.01**	**ΔR^2**		**.02†**

† $p < .10$ * $p < .05$ ** $p < .01$

APPENDIX H

Table 20

Regression Results with Opinion Leaders Removed (Standardized Beta coefficients reported)

HUMAN CAPITAL FIRST			INSTITUTIONAL FIRST		
Control Variable			**Control Variable**		
1993 Sales $	.48**		1993 Sales $	.48**	
R^2		**.23**	**R^2**		**.23**
Adjusted R^2		**.23**	**Adjusted R^2**		**.23**
ΔR^2		**.23****	**ΔR^2**		**.23****
Human Capital Block			**Institutional Block**		
Service	-.03		Percent Unionized	-.10	
Capital Intensity	-.15*		Fortune Reputation	.08	
Industry Dynamism	-.05		Industry Adoption	.12	
Education Level	.05				
Training Dollars	.34**				
Percent Male	-.11				
Average Age	-.10				
R^2		**.36**	**R^2**		**.27**
Adjusted R^2		**.33**	**Adjusted R^2**		**.25**
ΔR^2		**.13****	**ΔR^2**		**.04***
Institutional Block			**Human Capital Block**		
Percent Unionized	-.20*		Service	.01	
Fortune Reputation	.04		Capital Intensity	-.16*	
Industry Adoption	.15†		Industry Dynamism	-.04	
			Education Level	-.06	
			Training Dollars	.35**	
			Percent Male	.02	
			Average Age	-.07	
R^2		**.41**	**R^2**		**.41**
Adjusted R^2		**.37**	**Adjusted R^2**		**.37**
ΔR^2		**.05****	**ΔR^2**		**.14****
Human Capital Two Way Interactions Block			**Institutional Interactions Block**		
Percent Male x Average Age	-.17		Industry Adoption x Service	.57	
Education x Percent Male	.14		Industry Adoption x Dynamism	.24	
Education x Average Age	-.13				
CI x Percent Male	-.08				
CI x Average Age	.33				
R^2		**.42**			
Adjusted R^2		**.35**			
ΔR^2		**.01**			
Human Capital Three Way Interactions Block					
CI x Percent Male x Average Age	-.53				
Education x Percent Male x Ave. Age	.53				
R^2		**.43**	**R^2**		**.42**
Adjusted R^2		**.36**	**Adjusted R^2**		**.37**
ΔR^2		**.01**	**ΔR^2**		**.01**
Institutional Interactions Block			**Human Capital Interactions Block**		
Industry Adoption x Service	.49		Percent Male x Average Age	-.19	
Industry Adoption x Dynamism	.27		Education x Percent Male	.13	
			Education x Average Age	-.10	
			CI x Percent Male	-.08	
			CI x Average Age	.24	
			R^2		**.42**
			Adjusted R^2		**.35**
			ΔR^2		**.01**
			Human Capital Three Way Interactions Block		
			CI x Percent Male x Average Age	-.52	
			Education x Percent Male x Ave. Age	.50	
R^2		**.44**	**R^2**		**.44**
Adjusted R^2		**.36**	**Adjusted R^2**		**.36**
ΔR^2		**.01**	**ΔR^2**		**.01**

† $p < .10$ * $p < .05$ ** $p < .01$

LIST OF REFERENCES

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Abrahamson, E. (1991). Managerial fads and fashions: The diffusion and rejection of innovations. Academy of Management Review, 16, 586-612.

Abrahamson, E., & Rosenkopf, L. (1993). Institutional and competitive bandwagons: Using mathematical modeling as a tool to explore innovation diffusion. Academy of Management Review, 18, 487-517.

Advancing women in the workplace. (1993, September). Training & Development, 9-10.

Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage.

Aiken, M., & Alford, R. (1970). Community structure and innovation: The case of urban renewal. American Sociological Review, 35, 650-665.

Aiken, M., & Hage, J. (1971). The organic organization and innovation. Sociology, 5, 63-82.

Andrews, E. S. (1992). Expanding opportunities for older workers. Journal of Labor Research, 13, 55-65.

Asher, J. J. (1972). The biographical item: Can it be improved? Personnel Psychology, 25, 251-269.

Auerbach, J. D. (1988). In the business of child care: Employer initiatives and working women. New York: Praeger.

Bacharach, S. B., Bamberger, P., & Conley, S. (1991). Work-home conflict among nurses and engineers: Mediating the impact of role stress on burnout and satisfaction at home. Journal of Organizational Behavior, 12, 39-53.

Bailey, T. (1993). Organizational innovation in the apparel industry. Industrial Relations, 32, 30-48.

Baron, J. N., Dobbin, F. R., & Jennings, P. D. (1986). War and peace: The evolution of modern personnel administration in U. S. industry. American Journal of Sociology, 92, 350-383.

Becker, G. S. (1975). Human capital (2nd ed.). New York: National Bureau of Economic Research.

Becker, G. S. (1976). The economic approach to human behavior. Chicago: University of Chicago Press.

Bedeian, A. G., Burke, B. G., & Moffett, R. G. (1988). Outcome of work-family conflict among married male and female professionals. Journal of Management, 14, 475-491.

Blegan, M., Mueller, C., & Price, J. (1988). Measurement of kinship responsibility for organizational research. Journal of Applied Psychology, 73, 402-409.

Blum, T. C., Fields, D. L., & Goodman, J. S. (1994). Organizational-level determinants of women in management. Academy of Management Journal, 37, 241-268.

Bohen, H., & Viveros-Long, A. (1981). Balancing jobs and family life. Philadelphia: Temple University Press.

Bowen, D. E. & Schneider, B. (1988). Services marketing and management: Implications for organizational behavior. In B. M. Staw & L. L. Cummings (Eds.), Research in organizational behavior (Vol. 10, pp. 43-80). Greenwich, CT: JAI Press.

Brody, J. E. (1991, July 7). Children of divorce: Steps to help can hurt. New York Times, p. C1.

Bronson, C. E. (1993). Family and environmental values, combined. Human Resource Professional, 6, 14-16.

Cascio, W. F., & Zammuto, R. F. (1987). Societal trends and staffing policies. Denver, CO: University of Colorado.

Catalyst. (1983). Maternity and parental leaves of absence. New York: Author.

Christensen, K. E. (1989). Flexible staffing and scheduling. New York: The Conference Board.

Cohen, A. R. &, Gadon, K. (1978). Alternative work schedules: Integrating individual and organizational needs. Reading, UK: Addison-Wesley.

Cohen, J., & Cohen, P. (1983) Applied multiple regression/correlation analysis for the behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.

Colligan, M., & Tepas, D. I. (1986). The stress of hours at work. American Industrial Hygiene Association Journal, 47, 686-695.

Cook, A. H. (1989). Public policies to help dual-earner families meet the demands of the work world. Industrial and Labor Relations Review, 42, 201-215.

Cooke, R. A., & Rousseau, D. M. (1984). Stress and strain from family roles on work-role expectations. Journal of Applied Psychology, 69, 252-260.

Cooper, W. H., & Richardson, A. J. (1986). Unfair comparisons. Journal of Applied Psychology, 71, 179-184.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. Journal of Applied Psychology, 78, 98-104.

Daft, R. L. (1978). A dual-core model of organizational innovation. Academy of Management Journal, 21, 193-210.

Dalton, D., & Mesch, D. (1990). The impact of flexible scheduling on employee attendance and turnover. Administrative Science Quarterly, 35, 370-387.

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. Academy of Management Journal, 34, 555-590.

Damanpour, F., & Evan, W. M. (1984). Organizational innovation and performance: The problem of "organizational lag." Administrative Science Quarterly, 29, 392-409.

Dass, P. (1993). The multi-dimensionality of organizational change: Developing and testing models of change in organizations. Unpublished doctoral dissertation, Michigan State University, East Lansing, MI.

Department of Labor. (1993). Work and family resource kit. Washington, DC: Author.

Dess, G. G., & Beard, D. W. (1984). Dimensions of organizational task environments. Administrative Science Quarterly, 29, 52-73.

Deutschman, A. (1990, August 27). What 25-year-olds want. Fortune, 42-48.

DiMaggio, P., & Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organization fields. American Sociological Review, 48, 147-160.

DuBrin, A. J., & Barnard, J. C. (1993). What telecommuters like and dislike about their jobs. Business Forum, 18, 13-17.

Dunham, R. B., Pierce, J. L., & Castaneda, M. (1987). Alternative work schedules: Two field quasi-experiments. Personnel Psychology, 40, 215-242.

Dutton, J. E., & Ashford, S. J. (1993). Selling issues to top management. Academy of Management Review, 18, 397-428.

Duxbury, L. E., & Higgins, C. A. (1991). Gender differences in work-family conflict. Journal of Applied Psychology, 76, 60-74.

Duxbury, L. E., Higgins, C. A., Lee, C., & Mills, S. (1992). An examination of organizational and individual outcomes. Optimum, 23, 46-59.

Eberhardt, B. J., & Shani, A. B. (1984). The effects of full-time versus part-time employment status on attitudes toward specific organizational characteristics and overall job satisfaction. Academy of Management Journal, 27, 893-900.

Erikson, E. (1980). Identity and the life cycle. New York: Norton.

Ermisch, J. F., & Wright, R. E. (1993). Wage offers and full-time and part-time employment by British women. Journal of Human Resources, 28, 111-133.

Farnham, A. (1994, February 7). America's most admired companies. Fortune, 50-95.

Families and Work Institute. (1990). Unpublished needs assessment, 1989-1991. New York: Author.

Families and Work Institute. (1991). The corporate guide to work-family programs. New York: Author.

Feldman, D. C. (1990). Reconceptualizing the nature and consequences of part- time work. Academy of Management Review, 15, 103-112.

Fierman, J. (1994, March 21). Are companies less family-friendly? Fortune, 64-67.

Flamholtz, E. G., & Lacey, J. M. (1981). Personnel management, human capital theory and human resource accounting. Los Angeles: Institute of Industrial Relations, University of California.

Fombrun, C. J., & Shanley, M. (1990). What's in a name: Reputation building and corporate strategy. Academy of Management Journal, 33, 233-258.

Friedman, D. E. (1990a). Work and family: The new strategic plan. Human Resource Planning, 13, 79-89.

Friedman, D. E. (1990b). Increasing the supply of child care: The family day care approach. New York: National Association of Child Care Resource and Referral Agencies.

Friedman, D. E. (1991). Linking work-family issues to the bottom line. New York: The Conference Board.

Friedman, D. E., & Galinsky, E. (1992). Work and family issues: A legitimate business concern. In S. Zedeck (Ed.), Work, families, and organizations (pp. 168-207). San Francisco: Jossey-Bass.

Frone, M. R., Russell, M., & Cooper, M. L. (1992). Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface. Journal of Applied Psychology, 77, 65-78.

Frone, M. R., Russell, M., & Cooper, M. L. (1993). Relationship of work-family conflict, gender and alcohol expectancies to alcohol use/abuse. Journal of Organizational Behavior, 14, 545-558.

Galinsky, E. (1989). Labor force participation of dual-earner couples and single parents. Investing in people: A strategy to address America's workforce crisis. Washington, DC: U.S. Department of Labor.

Galinsky, E., & Hughes, D. (1987). The Fortune magazine study. New York: Families and Work Institute.

Garland, S. B. (1991, May 20). Those aging boomers. Business Week, 106-113.

Goff, S. J., Mount, M. K., & Jamison, R. L. (1990). Employer supporter child care, work/family conflict and absenteeism: A field study. Personnel Psychology, 43, 793-809.

Good, L. K., Sisler, G. F., & Gentry, J. W. (1988). Antecedents of turnover intentions among retail management personnel. Journal of Retailing, 64, 295-314.

Goodstein, J. D. (1994). Institutional pressures and strategic responsiveness: Employer involvement in work-family issues. Academy of Management Journal, 37, 350-382.

Greenglass, E. R., Pantony, K., & Burke, R. J. (1989). A gender-role perspective on role conflict, work stress, and social support. In E. B. Goldsmith (Ed.), Work and family (pp. 23-44). Newbury Park, CA: Sage.

Greenhaus, J. H., Bedeian, A. G., & Mossholder, K. W. (1987). Work experiences, job performances, and feelings of personal and family well-being. Journal of Vocational Behavior, 31, 200-215.

Greenhaus, J. H., & Beutell, N. J. (1985). Source of conflict between work and family roles. Academy of Management Review, 10, 76-88.

Greenhaus, J. H., & Kopelman, R. E. (1981). Conflict between work and nonwork roles: Implications for the career planning process. Human Resource Planning, 4, 1-10.

Greenhaus, J. H., Parasuraman, S., Granrose, C. S., Rabinowitz, S. R., & Beutell, N. J. (1989). Sources of work-family conflict among two-career couples. Journal of Vocational Behavior, 34, 133-153.

Grover, S. L., & Crooker, K. J. (1995). Who appreciates family-responsive human resource policies: The impact of family-friendly policies on the organizational attachment of parents and non-parents. Personnel Psychology, 48, 1-17.

Gutek, B. A., Searle, S., & Klepa, L. (1991). Rational versus gender role explanations for the work-family conflict. Journal of Applied Psychology, 76, 560-568.

Hackman, R. J. (1975). Is job enrichment just a fad? Harvard Business Review, 53, 129-138.

Hall, D. T. (1990). Telecommuting and the management of work-home boundaries. In Paradigms revised: Annual review of communications and society (pp. 177-208). Institute for Information Studies (Nashville, TN: Northern Telecom Inc. & Queenstown, MD: Aspen Institute).

Hawk, R. H. (1967). The recruitment function. New York: American Management Association.

Hewitt & Associates. (1990). Work and family benefits provided by major U. S. employers in 1990. Lincolnshire, IL: Author.

Higgins, C. A., & Duxbury, L. E. (1992). Work-family conflict: A comparison of dual-career and traditional-career men. Journal of Organizational Behavior, 13, 289-411.

Higgins, C. A., Duxbury, L. E., & Irving, R. H. (1992). Work-family conflict in the dual-career family. Organizational Behavior and Human Decision Processes, 51, 51-75.

Hochschild, A. (1983). The managed heart. Berkeley, CA: University of California.

Hunt-Scanlon Publishing Co., Inc. (1994) Hunt-Scanlon's Select Guide to Human Resource Executives. Greenwich, CT: Author.

Hyland, S. L. (1990. September). Helping employees with family care. Monthly Labor Review, 22-26.

Jackson, S. E., & Schuler, R. S. (forthcoming). Understanding human resource management in the context of organizations and their environments. In Annual Review of Psychology 1995.

Jackson, S. E., Schuler, R. S., & Rivero, J. C. (1989). Organizational characteristics as predictors of personnel practices. Personnel Psychology, 42, 727-786.

Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. Administrative Science Quarterly, 24, 602-611.

Johns, G. (1993). Constraints on the adoption of psychology-based personnel practices: Lessons from organizational innovation. Personnel Psychology, 46, 569-592.

Johnson, A. A., & Rose, K. L. (1992). The emerging role of the work-family manager. New York: The Conference Board.

Johnston, W. B., & Packer, A. E. (1987). Workforce 2000: Work and workers for the 21st century. Washington, DC: U. S. Department of Labor.

Judge, T. A., & Hulin, C. L. (1993). Job satisfaction as a reflection of disposition: A multiple source causal analysis. Organizational Behavior and Human Decision-Making Processes, 56, 388-421.

Judge, T. A., & Watanabe, S. (1994). Individual differences in the nature of the relationship between job and life satisfaction. Journal of Occupational and Organizational Psychology, 67, 101-107.

Kahn, R. L., Wolfe, D. M., Quinn, R., Snoek, J. D., & Rosenthal, R. A. (1964). Organizational stress. New York: Wiley.

Kahne, H. (1985). Reconceiving part time work: New perspectives for older workers and women. Totowa, NJ: Rowman & Allanheld.

Kanter, R. M. (1977). Work and family in the United States: A critical review and agenda for research and policy. New York: Sage.

Kanter, R. M. (1983). The changemasters: Innovation and entrepreneurship in the American corporation. New York: Simon and Schuster.

Katz, D. & Kahn, R. L. (1978). The social psychology of organizations. New York: Wiley.

Keats, B. W., & Hitt, M. A. (1988). A causal model of linkages among environmental dimensions, macro organizational characteristics and performance. Academy of Management Journal, 31, 570-598.

Keith, P. M., & Schafel, R. B. (1980). Role strain and depression in two-job families. Family Relations, 29, 483-488.

Kelly, R. F., & Voydanoff, P. (1985). Work/family role strain among employed parents. Family Relations, 34, 367-374.

Kerlinger, F. N. (1986). Foundations of behavioral research (3rd ed.). New York: Holt, Rinehart and Winston.

Kinkead, G. (1980, April 7). On a fast track to the good life. Fortune, 74-84.

Kofodimos, J. (1993). Balancing act: How managers can integrate successful careers and fulfilling personal lives. San Francisco: Jossey-Bass.

Kopelman, R. E. (1986). Alternative work schedules and productivity: A review of the evidence. National Productivity Review, 6, 150-165.

Kopelman, R. E., Greenhaus, J. H., & Connolly, T. F. (1983). A model of work, family, and interrole conflict: A construct validation study. Organizational Behavior and Human Performance, 32, 198-215.

Kossek, E. E. (1990). Diversity in child care assistance needs: Problems, preferences and work-related outcomes. Personnel Psychology, 43, 769-791.

Kossek, E. E., Barber, A. E., & Winters, D. (1993). Multi-level influences on individual acceptance of human resource innovation: The case of flexible work schedules. Academy of Management Proceedings. August 1993. Atlanta.

Kossek, E. E., Dass, P., & DeMarr, B. (1994). The dominant logic of employer-sponsored work and family initiatives: Human resource managers' institutional role. Human Relations, 47, 1121-1149.

Kossek, E. E., DeMarr, B. J., Backman, K., & Kollar, M. (1993). Assessing employees' emerging elder care needs and reactions to dependent care benefits. Public Personnel Management, 22, 617-637.

Kossek, E. E., & Nichol, V. (1992). The effects of on-site child care on employee attitudes and performance. Personnel Psychology, 45, 485-509.

Kraut, A. I. (1992). Organizational research on work and family issues. In S. Zedeck (Ed.), Work, families, and organizations (pp. 208-235). San Francisco: Jossey-Bass.

Kumar, N., Stern, L. W., & Anderson, J. C. (1993). Conducting interorganizational research using key informants. Academy of Management Journal, 36, 1633-1651.

Laabs, J. J. (1993, July). Family issues are a priority at Stride-rite. Personnel Journal, 72, 48-54.

Latham, G. P., & Saari, L. M. (1984). Do people do what they say? Further studies on the situational interview. Journal of Applied Psychology, 69, 569-573.

Lawler, E. E. III, & Mohrman, S. A. (1985). Quality circles after the fad. Harvard Business Review, 63, 65-71.

Lawler, E. E. III, Mohrman, S. A., & Ledford, G. E. Jr. (1992). Employee involvement and total quality management. San Francisco: Jossey-Bass.

Leabo, D. A. (1976). Basic Statistics (5th ed.). Homewood, IL: Richard D. Irwin.

Lee, C., Duxbury, L., Higgins, C., & Mills, S. (1992). Strategies used by employed parents to balance the demands of work and family. Optimum, 23, 60-69.

Levering, R., & Moskowitz, M. (1993). The 100 best companies to work for in America (3rd ed.). New York: Currency-Doubleday.

Levering, R., Moskowitz, M., & Katz, M. (1984). The 100 best companies to work for in America. Reading, MA: Addison-Wesley.

Levitan, S. A., & Belous, R. A. (1979). Minder werk, meer werk [Less work, more work]. Deventer, the Netherlands: Kluwer.

Louchheim, F. P. (1990, March). Executive retirement: Change trauma into opportunity. Personnel Journal, 69, 26-32.

Marquardt, D. W. (1980). Comment: You should standardize the predictor variables in your regression models. Journal of the American Statistical Association, 75, 87-90.

Martinez, M. N. (1990, August). Making room for work/family positions. HR Magazine, 45-47.

Mattis, M. C. (1990). New forms of flexible work arrangements for managers and professionals: Myths and realities. Human Resource Planning, 13, 133-146.

Meyer, A. D., Brooks, G. R., & Goes, J. B. (1990). Environmental jolts and industry revolutions: Organizational responses to discontinuous change. Strategic Management Journal, 11, 93-110.

Meyer, A. D., & Goes, J. B. (1988). Organizational assimilation of innovations: A multilevel contextual analysis. Academy of Management Journal, 31, 897-923.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. American Journal of Sociology, 83, 440-463.

Meyer, J. W., Scott, W. R., Cole, S., & Intili, J. K. (1978). Instructional dissensus and institutional consensus in schools. In M. Meyer (Ed.), Environments and organizations (pp. 233-263). San Francisco: Jossey-Bass.

Meyer, J. W., Scott, W. R., & Deal, T. E. (1981). Institutional and technical sources of organizational structure: Explaining the structure of educational organizations. In H. D. Stein (Ed.), Organization and the human services (pp. 151-179). Philadelphia: Temple University Press.

Milkovich, G., & Gomez, L. R. (1976). Child care and selected behaviors. Academy of Management Journal, 19, 111-115.

Miller, T. I. (1984). The effects of employer-sponsored child care on employee absenteeism, turnover, productivity, recruitment or job satisfaction: What is claimed and what is known. Personnel Psychology, 37, 277-289.

Milliken, F. J., Dutton, J. E., & Beyer, J. M. (1990). Understanding organizational adaptation to change: The case of work-family issues. Human Resource Planning, 13, 91-107.

Morgan, H., & Milliken, F. J. (1992). Keys to action: Understanding differences in organizations' responsiveness to work-and-family issues. Human Relations, 31, 227-248.

Nayyar, P. R. (1992). Performance effects of three foci in service firms. Academy of Management Journal, 35, 985-1009.

Near, J. P., Smith, C.A., Rice, R. W., & Hunt, R. G. (1984). A comparison of work and nonwork predictors of life satisfaction. Academy of Management Journal, 27, 184-190.

Noe, R. A., Hollenbeck, J. R., Gerhart, B., & Wright, P. M. (1994). Human resource management: Gaining a competitive advantage. Burr Ridge, IL: Austen.

Olmsted, B. (1992, Fall). Workplace flexibility: From employee accommodation to business strategy. Human Resources Professional, 25-27.

Orpen, C. (1981). Effects of flexible working hours on employee satisfaction and performance: A field experiment. Journal of Applied Psychology, 66, 113-115.

Orr, J. M., Sackett, P. R., & DuBois, C. L. (1991). Outlier detection and treatment in I/O psychology: A survey of researcher beliefs and an empirical illustration. Personnel Psychology, 44, 473-486.

Osborn, S. (1993). The three D's: Demographics, decentralization and downsizing. In Miranda, E. J. & Murphy, B. E. (Eds.), Work-family: Redefining the business case (pp. 29-30). New York: The Conference Board.

Osterman, R. (1994). How common is workplace transformation and who adopts it? Industrial and Labor Relations Review, 47, 173-188.

Parasuraman, S., Greenhaus, J. H., & Granrose, C. S. (1992). Role stressors, social support, and well-being among two-career couples. Journal of Organizational Behavior, 13, 339-356.

Parker, V. A., & Hall, D. T. (1992). Conclusion: Expanding the domain of family and work issues. In S. Zedeck (Ed.), Work, families, and organizations (pp. 432-451). San Francisco: Jossey-Bass.

Pedhazur, E. J. (1982). Multiple regression in behavioral research (2nd ed.). New York: Holt, Rinehart, & Winston.

Perin, C. (1990). The moral fabric of the office: Panopticon discourse and schedule flexibilities. In P. S. Tolbert & S. R. Barley (Eds.), Research in the sociology of organizations (Vol. 8, pp. 241-268). Greenwich, CT: JAI Press.

Pierce, J. L., & Delbecq, A. L. (1977). Individual attitudes and innovation. Academy of Management Review, 2, 26-37.

Pierce, J. L., & Dunham, R. B. (1992). The 12-hour workday: A 48-hour eight-day week. Academy of Management Journal, 35, 1086-1098.

Pierce, J. L., Newstrom, J. W., Dunham, R. B., & Barber, A. E. (1989). Alternative work schedules. Boston: Allyn & Bacon.

Pleck, J. H., Staines, G. L., & Lang, L. (1980, March). Conflicts between work and family life. Monthly Labor Review, 29-31.

Porac, J. F., Thomas, H., & Baden-Fuller, C. (1989). Competitive groups as cognitive communities: The case of Scottish knitwear manufacturers. Journal of Management Studies, 26, 397-416.

Rafaeli, A., & Sutton, R. I. (1987). Expression of emotion as part of the work role. Academy of Management Review, 12, 23-37.

Ralston, D. A. (1989). The benefits of flextime: Real or imagined. Journal of Organizational Behavior, 10, 369-373.

Ratan, S. (1993, October, 4). Generational tension in the office: Why busters hate boomers. Fortune, 56-70.

Reynolds, L. (1994, February). Washington confronts part-time American. Management Review, 83, 27-28.

Rice, R. W., Frone, M. R., & McFarlin, D. B. (1992). Work-nonwork conflict and the perceived quality of life. Journal of Organizational Behavior, 13, 155-168.

Rogers, E. M. (1982). Diffusion of innovation (3rd ed.). New York: Free Press

Roth, P. L. (1994). Missing data: A conceptual review for applied psychologists. Personnel Psychology, 47, 537-560.

Roush, C. (1993, June 28). Aetna's family-friendly executive. Business Week, 83.

Russell, C. (1991, May). On the baby boom bandwagon. American Demographics, 24-31.

Rynes, S. L., & Barber, A. E. (1990). Applicant attraction strategies: An organizational perspective. Academy of Management Review, 15, 286-310.

Rynes, S. L., & Boudreau, J. W. (1986). College recruiting in large organizations: practice, evaluation, and research applications. Personnel Psychology, 39, 729-757.

Saari, L. M., Johnson, T. R., McLaughlin, S. D., & Zimmerle, D. M. (1988). A survey of management training and education practices in U. S. companies. Personnel Psychology, 41, 731-743.

Schultz, T. W. (1960). The formation of human capital by education. Journal of Political Economy, 68, 571-583.

Schultz, T. W. (1961). Investment in human capital. American Economic Review, 51, 1-17.

Schwab, D. P. (1980). Construct validity in organizational behavior. In B. M. Staw & L. L. Cummings (Eds.), Research in organizational behavior (Vol. 2, pp. 3-43), Greenwich, CT: JAI Press.

Scott, W. R. (1987). The adolescence of institutional theory. Administrative Science Quarterly, 32, 493-511.

Scott, W. R. (1992). Organizations: Rational, natural and open systems (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Scott, W. R., & Meyer, J. W. (1991). The rise of training programs in firms and agencies: An institutional perspective. In B. M. Staw & L. L. Cummings (Eds.), Research in organizational behavior (Vol. 13, pp. 297-326). Greenwich, CT: JAI Press.

Selznick, P. (1957). Leadership in administration. New York: Harper & Row.

Shamir, B. (1992). Home: The perfect workplace? In S. Zedeck (Ed.), Work, families, and organizations (pp. 272-311). San Francisco: Jossey-Bass.

Shavelson, R. J. (1988). Statistical reasoning for the behavioral sciences (2nd ed.). Boston: Allyn & Bacon, Inc.

Shellenbarger, M. (1992). Lessons from the workplace: How corporate policies and attitudes lag behind workers' changing needs. Human Resources Management, 31, 157-169.

Small Steps. US West: Has been lauded for its policies described as family friendly. (1993, June 21). Wall Street Journal, p. R10.

Snell, S. A., & Dean, J. W., Jr. (1992). Integrated manufacturing and human resource management: A human capital perspective. Academy of Management Journal, 35, 467-504.

Solomon, N. A., & Templer, A. J. (1993). Development of non-traditional work sites: The challenge of telecommuting. Journal of Management Development, 12, 21-32.

Steel, R. P., & Lloyd, R. F. (1988). Cognitive, affective, and behavioral outcomes of participation in quality circles: Conceptual and empirical findings. Journal of Applied Behavioral Science, 24, 1-17.

Stinchcombe, A. L. (1965). Constructing social theories. New York: Harcourt, Brace, & World.

Tait, M., Padgett, M. Y., & Baldwin, T. T. (1989). Job and life satisfaction: A re-examination of the strength of the relationship and gender effects as a function of the date of the study. Journal of Applied Psychology, 74, 502-507.

Tenbrunsel, A. E., Brett, J. M., Stroh, L. K., & Reilly, A. H. (1994). Dynamic and static work-family relationships: A comparative analysis of males and females. Paper presented at RMD Conference on Causal Modeling. West Lafayette, IN.

Terpstra, D. E., & Rozell, E. J. (1993). The relationship of staffing practices to organizational level measures of performance. Personnel Psychology, 46, 27-48.

Thierry, H., & Meijman, T. (1994). Time and behavior at work. In H. C. Triandis, M. D. Dunnette, & L. M. Hough (Eds.), Handbook of industrial and organizational psychology (Vol. 4, pp. 341-414). Palo Alto, CA: Consulting psychologists press.

Thompson, J. D. (1967). Organizations in action. New York: McGraw-Hill.

Tomaskovic-Devey, D., Leiter, J., & Thompson, S. (1994). Organizational survey nonresponse. Administrative Science Quarterly, 39, 439-457.

Toutelian, D. H., & Gaedeke. R. M. (1987). Fortune 500 list revisited: Still an endangered species for academic research? Journal of Business Research, 15, 359-363.

Trist, E. L. (1981). The evolution of socio-technical systems as a conceptual framework and as an action research plan. In A. H. Van de Ven & W. F. Joyce (Eds.), Perspectives on organization design and behavior. New York: John Wiley – Wiley Interscience.

Tsang, M. C., Rumberger, R. W., & Levin, H. M. (1991). The impact of surplus schooling on worker productivity. Industrial Relations, 30, 209-228.

Van de Ven, A. H. (1986). Central problems in the management of innovation. Management Science, 32, 590-607.

Wagner, J. A., III. (1994). Participation's effects on performance and satisfaction: A reconsideration of research evidence. Academy of Management Review, 19, 312-330.

Wallace, M. J., & Fay, C. H. (1988). Compensation theory and practice. Boston: PWS-Kent.

Welsh, T. (1994. February 7). Best and worst reputations. Fortune, 58-66.

Wharton, A. S., & Erickson, R. J. (1993). Managing emotions on the job and at home: Understanding the consequences of multiple emotional roles. Academy of Management Review, 18, 457-486.

Williamson, O. E. (1981). The economics of organization: The transaction cost approach. American Journal of Sociology, 87, 548-577.

Yogev, S., & Brett, J. (1985). Patterns of work and family involvement among single and dual earner couples. Journal of Applied Psychology, 70, 754-768.

Youngblood, S. A. (1984). Work, nonwork, and withdrawal. Journal of Applied Psychology, 69, 106-117.

Zahrly, J., & Tosi, H. (1989). The differential effect of organizational induction process on early work adjustment. Journal of Organizational Behavior, 10, 59-74.

Zinn, L. (1992. December 14). Move over boomers. Business Week, 74-82.

Zucker, L. G. (1983). Organizations as institutions. In S. B. Bacharach (Ed.), Research in the sociology of organizations, 2, 1-47. Greenwich, CT: JAI Press.